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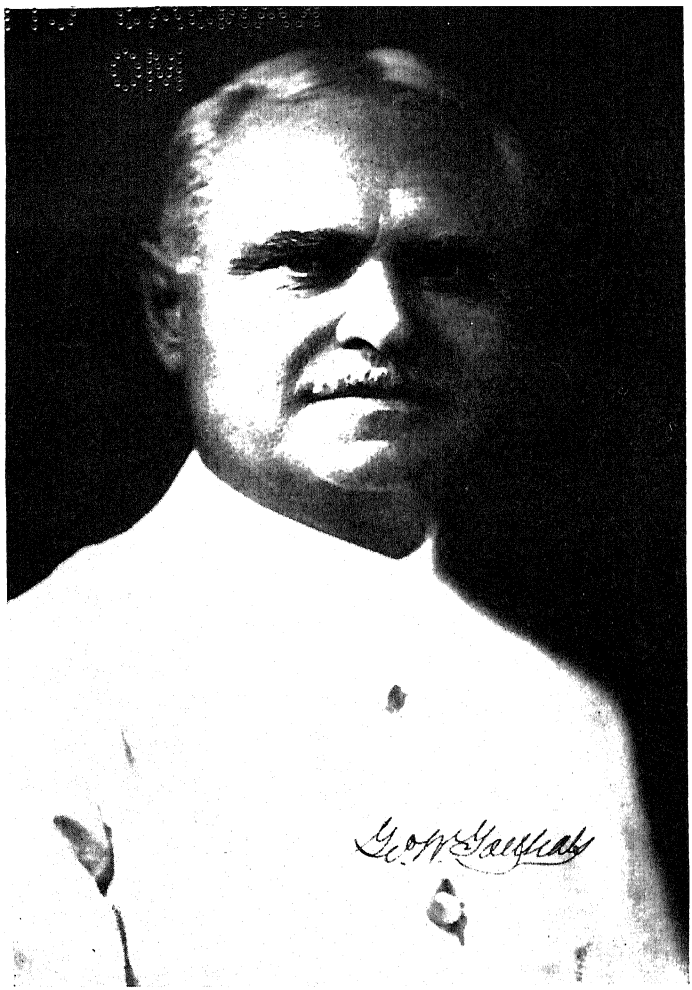
GOETHALS

GENIUS OF THE PANAMA CANAL



THE CHAIRMAN AND CHIEF ENGINEER, ISTHMIAN CANAL COMMISSION

GOETHALS

GENIUS OF THE PANAMA CANAL

A BIOGRAPHY

BY

JOSEPH BUCKLIN BISHOP

Author of "The Panama Gateway" and Editor of "Theodore Roosevelt's Letters to His Children"

AND

FARNHAM BISHOP

Author of "Our First War in Mexico"

HARPER & BROTHERS PUBLISHERS

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GOETHALS

GENIUS OF THE PANAMA CANAL

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TO

THE OLD CANAL MEN

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PREFACE

GENERAL GOETHALS would never sanction the writing of his biography, except in such brief summary as in the John Fritz Medal Book. In his later years he contemplated writing his memoirs, but deferred too long. The task was then undertaken by Goethals' close friend and Roosevelt's biographer, my father, Joseph Bucklin Bishop. But he, Joseph Bishop, was already advanced in age. Eighty years old, he had marched at half-step behind the caisson and stood uncovered beside the open grave, in midwinter, on the day of Goethals' funeral at West Point. His physician, Dr. Alexander Lambert, dated his declining health from that hour.

When my father died, after writing the opening pages of the fifth chapter of this book, history suffered a loss. No living man knows what he knew about Goethals and Roosevelt and the other actors, great and small, before and behind the scenes, where he himself played an important part. Had he lived to write of that great period of Goethals' life, the building of the Panama Canal, my father would have been

able to relate a more intimate story. I have taken the responsibility of publishing for the first time excerpts from my father's confidential reports to President Roosevelt.

For permission to quote from these reports I am indebted to Mrs. Theodore Roosevelt. To their custodian at the Library of Congress, Mrs. E. K. Fitzpatrick, I wish to express my gratitude for her zealous aid. The Goethals family have given me unrestricted access to the General's papers, filed and arranged most carefully by his private secretaries. Colonel George R. Goethals has assisted in checking technical details. The Roosevelt Memorial Association has given me a quiet room, the use of the library, and the services of the entire staff of Roosevelt House, who have done everything possible to help me.

Permission has been granted by Charles Scribner's Sons for the incorporation in this book of material from Joseph Bucklin Bishop's *The Panama Gateway*, including the excerpt from Trautwine's *Private Notes*, and J. B. Bishop's *Notes and Anecdotes of Many Years*; by the Century Company, for material from my *Panama Past and Present* and articles in the *Century Magazine* and in *Writing of Today*; by the *New York Sun* for the cartoon

by Rogers; by the *Washington Star* for the passages from the article by Mr. Edgar Young; by the *American Magazine* for quotation from the article by Mr. Samuel Crowther; by Dr. Howard C. Hill and the University of Chicago Press for the citations from his thesis on "Roosevelt and the Caribbean"; by the Chamber of Commerce of the State of New York for the extracts from its *Bulletins*; by the Commissioners of the Port of New York Authority and by the American Iron and Steel Institute for copies of their official publications. The Hon. T. V. O'Connor, chairman of the United States Shipping Board, and Mr. A. L. Flint, chief of the Washington Office of the Panama Canal, have given their personal assistance in obtaining information.

I wish also to express my gratitude to the following: ex-Chief-Justice William H. Taft, Under-Secretary of State Joseph P. Cotton, Ambassador Edge, Mr. Raymond B. Stevens, Adviser in Foreign Affairs to H. M. the King of Siam; Mr. Sydney B. Williamson, Mr. Edward N. Hurley, Mr. Charles M. Schwab, Mr. E. H. Outerbridge, Major-General J. L. Chamberlain, Major-General W. M. Black, Major-General C. D. Rhodes, Brigadier-General R. E. Wood, Colonel G. J. Fiebeger, and Major F. W. Whitly, U. S. A.; Admiral H. H. Rousseau, Ad-

miral W. H. Bronson, and Commander Andrew McAllister, U. S. N.; Mr. William Loeb, Mr. Joseph Tumulty, Mr. Kermit Roosevelt, Mr. Charles E. Hewitt, Mr. Charles Stewart, Judge Frank Feuille, Mr. George M. Wells, Mr. John O. Collins, Mr. Charles Ernest Beck, Mr. R. H. Whitehead, Mr. W. G. B. Thompson, Mr. William Denman, Professor John Bates Clark, Mr. F. Huntington Clark, Mr. F. A. Eustis, Mr. Henry C. Meyer, Messrs. Baldwin, Hutchins and Todd, counsel for the Boldt estate, Mr. Gelett Burgess and Mr. Ray Stannard Baker. Much valuable material has been taken from the beautiful memorial volume prepared by General M. L. Walker, governor of the Panama Canal, and others who served under General Goethals.

FARNHAM BISHOP.

PUBLISHERS' NOTE

The publishers deeply regret to have to announce the death of Mr. Farnham Bishop, which occurred on February 16, 1930, just when this book was ready for press.

GOETHALS

GENIUS OF THE PANAMA CANAL

CHAPTER I

THE COLONEL

Have they canned you on the run?
  Tell the Colonel;
Tell the tale of what they've done
  To the Colonel.

Take your sorrows and your woes
  To the Colonel;
He will understand, he knows,
  Does the Colonel.

—Panama Roughneck Ballads, 1912.

HE BECAME a major-general and died a civil engineer, but to those of us who were with him on the Isthmus he will always be "The Colonel." There were plenty of other colonels in the Zone: Sibert at Gatun, Gaillard in the Cut, Gorgas at Ancon, the C. O. of the Tenth Infantry at Las Cascadas, *and* Colonel Tom Cook. But whenever you overheard one Canal man talking to another about "The Colonel," you simply took it for granted that he meant Colonel Goethals.

And then, if you weren't in a hurry to get somewhere, but just killing time on the deck of a Panama Railroad boat or the porch of a Commission clubhouse between the commissary ice-cream and the one-o'clock whistle, why, you'd stop and listen to what this old-timer had to say about the Colonel. And by the time he was through, he'd have a dozen men or more bunched up around him, everybody anxious to hear and even more anxious to take the floor and tell the crowd about *his* personal experience with the Old Man.

Take Shorty of the car-repair shops, for instance. What with the unloaders plowing splinters as long as your leg out of the Lidgerwood flats and the steam-shovels dropping five-ton lumps of trap on the Oliver dumps, Shorty and his shopmates were getting plenty of work and some left over. But instead of hiring more white American union labor, the shop superintendent began assigning some of the black Jamaican helpers to regular car-repair work, thereby obtaining semi-skilled labor for the price of common, and keeping down the superintendent's record for overhead. When the union men protested, he gave them no satisfaction.

"So we held a meeting," said Shorty, "And I was one of the committee appointed to go up to Culebra

next Sunday morning, to put it up to the Colonel. He passed around the cigarettes and asked us what we had on our minds. We asked him, hadn't President Taft made an agreement with the unions that every Canal job that could be filled with white American union labor would be so filled? He had, said the Colonel. And wasn't car-repairin' that sort of a job, for Americans on the gold-roll, instead of a bunch of silver-roll Jamaicans? It was, said the Colonel. Well, would the Colonel please look into the matter himself, personal? And when he sprung that smile of his and nodded, why we all grinned back, reached for our hats, and walked out, feelin' satisfied.

"The very next morning, I crawled out from under a busted Lidgerwood I was workin' on in the shop, straightened up—and there was the Colonel standing right beside me. Nobody'd seen nor heard him comin'. No, he don't gumshoe any, but he walks fast and he sure don't send no brass band on ahead of him when he's inspectin'. He just stands there and takes a look around."

"And how much did he see of what he was looking at?" asked a rather superior-looking and skeptical clerk. "Did he get wise to everything that was going on?"

"There isn't a tool in the shop," answered Shorty,

very earnestly, "that he doesn't know—and know right."

All the roughnecks present nodded emphatic agreement. There wasn't a tool in the shop that the Colonel didn't know—and know right.

"And what did he say, Shorty?" asked a drill-runner.

" 'Don't let a Jamaican touch another tool'—that's what he said. The super, he threw a swell fit.

" 'Why—why—then I'll have to send to the States for seventy-five—eighty more high-price union men!' he splutters.

" 'Cable New York for them now,' orders the Colonel, lookin' at him very calm. 'You should have done so in the first place. You're responsible. Good morning.'

"And he walks out."

"Ah," said the clerk, very knowingly, "but wouldn't the Colonel have sided with the superintendent, if Taft had left him a free hand? The military mind ——"

"Say, how long have *you* been on the Isthmus?" rumbled the big drill-runner, belligerently. "All of six weeks, eh? I came down here in 1905 and before that I served a hitch in the Islands, observin' the military mind. What kind of a mind do you expect him

to have, when he came outta West Point? Of course he's military. Of course he'd like nothing better than to get rid of the unions and have every workingman taking orders like a buck in the line. If Goethals had been President, he never would have made that agreement with the unions till there was skating on the Chagres. But—now get this straight, fella—just as soon as Big Bill gave the Government's word, right from then on, that promise has been the law and the regulations and the customs of the service, for the Colonel. He never spent any time yet figuring how to get out of keeping a promise. You've got your work and you'll do it; you've got your rights and you'll get 'em, every time."

"I got mine all right, though it was only a little thing for him to bother about," testified a Brotherhood man. "I was pulling a string of dirt-cars out of the borrow-pit at Gatun, when who do I see come stepping along the ties but the Old Man. He swings aboard the engine and asks me for a drink of water.

" 'Pretty warm,' says he, when I'd drawn him one from the cooler in the cab.

" 'Yes, sir,' says I, 'I'm supposed to be getting ten pounds of ice to put in it every morning, but I'm not getting more'n a pound lately.'

"The Colonel didn't say anything. But say, next morning I drew an iceberg!"

"Yeah, and somebody else got stung for that little graft, you can bet your pants," declared the next speaker. "Remember that foreman at Peter Magill,[1] who was shaking down his gang of Gallegos—making 'em come across every payday? They got together and picked some of the bunch that could handle the most English to go up to Culebra for a *hablar* with the Colonel. First thing Mr. Foreman knew, a trap-door opened right under him and he dropped through and the job swung back and he wasn't on it. That guy is out making Zone highways now with the rest of the chain-gang."

"Take a slant at it from my angle," put in a swanky, swaggering Zone policeman in a tailored uniform and a new Stetson tilted ever so slightly to one side. "I've been a soldier or a policeman for twenty years and some over, and this is the straightest, cleanest job I've ever struck. I like it. If I want to arrest a man, I don't have to look up his politics first. Did I ever tell you about Mac, my old side-kick at Culebra? He was walking post when he heard a big clatter of hoofs and two young fellers on horseback came tearing along at the gallop, right through

[1] Orthodox Canal Zone pronunciation of "Pedro Miguel."

the married quarters where they might have ridden over somebody's kid before they could pull up. Well, Mac pulled 'em up and pulled 'em in, for reckless riding. At the station, when the desk sergeant asked the young fellers to give their names, one of 'em turned out to be Tom Goethals and the other was young Gaillard. So the sergeant just let 'em go and dismissed the charges.

"I guess the boys talked too much when they got home. Anyhow, the Colonel heard something and he landed all four on the carpet. Everybody knew him well enough to come clean. The Colonel warned the boys straight that next time anything like that happened, he'd lock up their horses and they'd walk. And then, so help me, he broke that hand-shaking sergeant and gave his stripes to Mac for doing his duty.

"Now that's what I call justice. But how often do you see it handed out like that, in this man's world?"

Justice—that was the keyword of almost all those hundreds of stories they told about the Colonel. His men remember him not so much as the great engineer as what one old-timer called him once when we were waiting for a south-bound at Culebra station and listening to the hymns the Jamaicans were shouting in the black-and-red tin chapel across the tracks.

"I've been a railroad man for twenty-five years," said the veteran, reminiscently. "And I've never seen better railroading than what we've got right here on the Isthmus. I've worked for 'em all, from Jim Hill up and down the line, and the Colonel is the squarest boss I've ever worked for."

When it came to straightening out a tangle of rights and wrongs, the Colonel's methods remind me of old Horse Avery that Harry Knibbs used to tell about up in Maine. When the spring drive jammed in the river bend, piling half a million logs up in one jackstraw game and the white water wedging them together so tight that the lumberjacks couldn't break the jam, then the boss would send out a hurry call for Horse Avery. When he came, he'd squat on the river bank and study the mess while everybody else stood back and left him alone. After a while, Horse Avery would walk out on the jam and probe it with a peavey. In bad cases, he'd operate with a stick or two of dynamite. First thing the crowd knew, the jam was breaking, the drive was moving—Horse Avery had found the key-log and knocked it clear.

The Colonel had just that analytic power of seeing through to the root of the trouble, and when he found the key-log, out it came. In most cases, he tickled it out; cleared up the whole difficulty with a

laugh all round, simply by making everybody concerned see the facts of the case in their true relations. A sense of humor is nothing but a sense of proportion that enables you to see the mirthful incongruities of life. Goethals had this golden talent—and he never buried it in a napkin. It is a known and notable fact that nine-tenths of the complainants who brought their grievances into his office at Culebra on Sunday mornings walked out, like Shorty and his friends, grinning back at the Colonel's parting smile. He smiled with his eyes as well as his lips, and he always laughed with you, never at you.

But that office of his was famous also for interviews of a sterner kind. A certain very prominent employee who had had an intrigue with his neighbor's wife was summoned to Culebra. He saw no mirth in the steel-blue eyes that bored into his as the Colonel coldly pronounced judgment:

"You are going North on the next ship. Your annual leave will begin on the day you sail. On your arrival at New York, you will write out and send in your resignation, to take effect on the expiration of your leave, and your resignation will be accepted."

The man began to expostulate furiously. The Colonel merely added: "Mrs. Blank was sent up on the ship before you."

The man took his hat and left without another word.

Narrow - minded? Mid - Victorian? Puritanical? Yes, if you like. In the Colonel's eyes, the deadliness of the sin lay in the sinner's selfishness. To gratify his own lust he had betrayed not only his brother officer but every fellow employee in the Zone and every one of the American people who had sent him there to the Isthmus to help build the Canal. Instead of helping, this man was hindering the work and he must go. The job came first and everything else afterwards. That was the Colonel's creed.

W. H. May, private secretary and Cerberus of the outer office at Culebra throughout the Colonel's administration, knew him as intimately as any right-hand man ever knew his chief. He has sorted and filed and catalogued the voluminous mass of letters, orders, and other Goethals documents now in the vault at Roosevelt House with a minute accuracy and loving care for which no biographer can ever be sufficiently grateful. Bill May's judgment, spoken one evening at Culebra, back in the construction days, was characteristic.

"*He* never told me to fetch in a lot of papers and scatter 'em over the top of his desk, and then send the photographers in to take his picture, so folks

could see how busy he was. I've worked for some that did that, but the Colonel isn't that kind."

Goethals was not that kind. It is rather hard to expose anyone who was so little of a poseur, to debunk the life of a man who had practically no bunk in his system. It is of course much harder to escape the opposite danger of deifying him. Undeniably there is a Goethals cult, and its stanch devotees are the Old Canal Men. They adored him when he was alive, and now that he is dead they worship his memory. They are frankly sentimental and emotional and about as safe to trifle with on the subject of their faith as the pious mediæval baron who attended a public debate between a priest and a rabbi on the comparative merits of Christianity and Judaism. The rabbi was just beginning to apply a little Higher Criticism to the sources of the Gospels when the baron roared, "Thou liest, foul blasphemer!" bounded up on the platform, and split the rabbi's skull with a battle-ax.

A biographer should be neither a devotee nor a hyena. The Colonel had no use for any Odes of Praise. What he deserves is the justice he gave to others. But as the Zone policeman said, "How often do you see it handed out like that?"

CHAPTER II

THE BOY AND THE BOOK

Boni-Colle, ancien nom, l'effroi du Sarrasin
Sous le nom de Goethals qu'il tient du souverain,
Ayant sauvé les jours de trois jeunes captives
Fait orner son blason de leurs têtes naïves.

—Le Mayeur, "La Gloire Belgique," Canto VIII, p. 303.

WHEN M. Jules Jusserand, then Ambassador of France to the United States, visited the Isthmus and spent a Sunday morning at Culebra watching Colonel Goethals dispense swift and informal justice to all comers, the scholarly diplomat enthusiastically compared him to St. Louis judging his people beneath the oak at Vincennes. At that comparison, there rises behind the American's desk chair a shadowy figure in chain mail: Justus Goethals of Flanders, who, in the language of the old chronicler: "In 1250 followed the King of France, Louis the Saint, in his first crusade against the infidel Musselmans, where he, on account of his outstanding bravery, by that monarch, the worthy judge of chivalrous virtues, was dubbed a knight."

The genealogy of the Goethals family is one of the marvels of ancestral history. It runs for more than a thousand years back to its founder, Honorius, a Senator of Rome. He was not at all the classical type of Roman Senator who thrust one hand into the breast of his long white toga while he rolled out a Ciceronian peroration. Honorius spoke very Late Latin that was far on its way to becoming Early Italian, and one glimpse of the Senate he sat in would have frightened Cicero out of the city even faster than he sped Catiline. The Rome of Honorius was the barbarous, degenerate Rome of the ninth century of our era, when the Holy City was one of the unholiest spots on earth. Its politics had sunk to the lowest level, for it was ruled by gangsters who fought battles in the streets. The hard-bitten gang leaders called themselves princes and senators, and whenever they held a conference to elect the Pope and other local officeholders who were entirely in their control, they formed the Roman Senate of the period. They chose some rather startling persons to sit in St. Peter's chair. How Honorius voted at these elections we do not know, but on the battlefield he proved a stanch defender of the Holy See. When the Saracens invaded Apulia in the year 880, Honorius marched to meet them and crossed swords with their

emir. The Saracen's scimitar struck the Italian's neck a blow that would have been fatal had not Honorius been wearing an iron gorget that turned the slash. Before the Moslem could recover, Honorius cut him down and won the day. Italy is the land of nicknames; thereafter the descendants of Honorius were known as the Bonicolli—they had good necks. Their enemies probably referred to them as that perverse and stiff-necked generation.

Honorius left Rome in 890 for Florence and died there six years later. His son Giovanno became Count of the Marches of Tuscany; his grandson, Pietro Bonicolli, "after having distinguished himself in several tournaments," followed Arnold II, Count of Flanders, to Ghent, and was granted a tract of land outside that city. This estate was called the "Mude," and for three centuries the direct descendants of Pietro styled themselves, "Lords of Mude." There, in 1078, Gerrem Bonicolli was born, in whose lifetime the family surname was translated into the Flemish equivalent of Goethals. When he was at Constantinople on the First Crusade, some pedantic Byzantine put it into Greek, "Eutrachelos," which in turn was telescoped and Latinized into "Eucollus." The Flemish "Goethals," by a play between the word "*hals,*" "neck," and "*als,*" "all," was thrown

into reverse and used for the family motto and war cry, "In Als Goet!" The Abbé Ferrer, in his historical dictionary, observes that the Goethals family is known in history under the diverse denominations of Giedals, Golthal, Algœtus, Eucollus, Eutrachelos, and Panagathos.

Gerrem, Fourth Lord of Mude and first to bear the name of Goethals, was a mighty man of valor. According to the French chronicle, he was only seventeen at the time of the First Crusade. "Endowed with extraordinary strength and skill in the use of arms, although the only surviving son of his parents, he joined the Holy Expedition." At Constantinople, he was "admired for his bodily strength and agility in tournaments and tilts on horseback, triumphing over several pious knights." At the storming of Jerusalem in 1099, he followed his liege lord, Robert II, Count of Flanders, "The Lance and Sword of Christendom," over the walls of the Holy City, and by him was made a knight. Nor did he wait long for a device to paint upon his shield. Under date of 1100 it is recorded:

"The Knight Gerrem Goethals at Jaffa rescued three Christian maidens from the hands of a fanatic Saracen who was going to sacrifice them to his false prophet Mahomet; for this deed his sovereign, Rob-

ert II, Count of Flanders, lets him decorate the red field of his coat of arms with the busts of three maidens with golden hair, above a Moor holding a branch with three red roses in his hand; in order to have brought to the knowledge of the latest descendants through such a plain-telling crest the worthy heroic deed of this Flemish knight."

Gerrem Goethals died in 1165, leaving a son of the same name, who in 1177 "goes with his sovereign, Philip of Alsace, on a crusade to the Holy Land, where he enters into many a brave strife at arms, especially at the siege of Tyre." On a like crusade with the same sovereign, 1190, he "distinguishes himself and is dubbed by his prince a knight to reward him for his courage, bravery, piety, and his wise courtesy, of which he has given many proofs in so many battles and especially in the famous battle of Ascalon, so disastrous to the infidel Saracens." After a third and fourth crusade "against the Bulgars and other wild heathens," this second Gerrem Goethals retired from active service and died in 1226 at the age of seventy-seven years. It was his second son, Justus—sometimes called Eustachius—Goethals, who served St. Louis the King of France.

His brother Hendrik, the elder son of the second Gerrem Goethals, was known as the "pious knight."

Born in 1217, he was a "pupil of the famous teacher Albrecht the Good, fellow pupil of Thomas Aquinas bosom friend of St. Philip Beniti, founder of the religious Order of the Servites; after having taught philosophy and the Holy Scriptures with the best results, he was accepted in 1257 as doctor or teacher of theology in the celebrated college of the Sorbonne in Paris." This Hendrik Goethals, "great in the history of the Church and in universal literature," well known under the name of "The Solemn Teacher" and later as Grand Archdeacon of Doornyk (Tournai), died in 1292 and "was buried in the Cathedral of Doornyk under a costly marble tomb."

Out of the Dark Ages into the light and learning of the Middle Ages, through the stormy splendor of the Renaissance and the bitterness of the Reformation, on into modern times—generation after generation of this proud and ancient house lived up to the motto, "In All Things Good." Members of the family served as aldermen and civic magistrates in Ghent continuously, year after year. Archdeacon Hendrik's sister, the Abbess Justa, managed her abbey "with care and tenderness" until her death "in the extraordinary high age of 105 years." Learned canons, doctors of civil law, one doctor of medicine—Gillis Goethals—teachers at the Universities of Lou-

vain and Douai, keep step through the centuries with knights and captains who fought for Phillip the Good or Charles the Bold, until the two-handed sword dwindled to the rapier and the veteran Augustinus Goethals, "although high in years, having fought in the wars of the Emperor Charles the Fifth in Italy, Germany and Africa," charged home through powder smoke at "the Battle of St. Quentin in Picardy, won by the King of Spain, Philip II, against the King of France, Henry II" in 1558.

One martyr to his religion and sovereign, though a man of peace, showed a higher courage than that of the battlefield. On October 28, 1577, according to the Flemish genealogy, "Judocus Goethals, a rich, God-fearing, peaceable and prominent citizen of Ghent, true to his religion and his king, having refused to do service in the magistracy set up by the Beggars of the Sea,[1] as offered to him by Yonker van Hembyse, owner of Ryhove, and his followers, was taken bodily, thrown in prison in the Sausselet, where he was miserably tortured and his ears cut off, an atrocity that cost the life of his wife, Cathelyne van Guchte and of his eldest child, Marie Goethals, who both died from grief and sorrow. Judocus was ban-

[1] Grimly patriotic and fanatically Protestant Dutch sea-fighters, who caught up and flaunted the sneering nickname thrown at them by their enemies. To Judocus Goethals they were heretic rebels and pirates.

ished thereafter and his numerous landed possessions confiscated and sold, with the stock."

He returned secretly to Ghent, died there in 1582, and was buried secretly in the Cathedral of St. Bavon. His equally valiant sister, Joanna Goethals, was the only nun who remained at her post in the Convent of St. Lawrence when all the rest fled at the black time of the "Picture Storming": the desecration of churches and the destruction of holy images by iconoclastic Protestant mobs. She filled the place of the absent Mother Superior "with piety and wise prudence," and in her cloister "the children of her brother, Judocus Goethals, who had been tortured by the Beggars of the Sea, found refuge and were brought up in virtue."

A second Judocus Goethals, a century later, made a gesture worthy of Cyrano de Bergerac. A notable scholar, he had been "promoted at Louvain to Primus of Philosophy. . . . At his triumphant entrance into Ghent, the magistrates honored him with a silver ewer full of gold and silver coins. He dealt out immediately the money to the needy and kept the ewer as a souvenir of the affection of his fellow citizens."

When Napoleon returned from Elba, among the veterans who thronged to greet him rode Karl Au-

gustus Ernest Goethals, Officer of the Legion of Honor, Lieutenant-Colonel of the Regiment of Illyria in 1811, and of the 36th Battalion of Chasseurs in the dark days of 1814. He fought for Napoleon at Waterloo, entered the service of the Kingdom of the United Netherlands as Colonel of the 9th Battalion of the Line in 1815, and rose rapidly in rank until, at the outbreak of the "Glorious revolution of Belgium," he was made a divisional commander, Inspector-General of Infantry, and member of the General Staff.

Here the record ends as it began, with the clash of steel. In that stormy year when Antwerp's citizens and Dutch battalions of the line fought battles in the streets, there was published in Ghent a modest little volume of sixty-eight pages, with this inscription—here translated from the Flemish—upon its title page:

GOETHALS CHRONICLES
or
Chronological Curiosities Referring to the Members of the Ancient, Noble Ghentian House of Goethals
Compiled from Original Documents by
T. A. L. Schellinck of Ghent.
Printed by D. J. Vanderhaeghen, in the Onderstraet, No. 21, Ghent, 1830.

The author in his introduction, like the town-crier beating his drum, rolls forth the resounding periods of this glorious and glorifying sentence:

"The Province of East Flanders, one of the most prominent of the State possessions of Belgium, holds among many ancient noble houses one family excelling in its multitude of honorable titles and prolific in great men, whose most beautiful adornment has been morality; in heroic knights, whose world-known tournaments have filled our history; so rich in righteous deeds, with many exquisite pages; in valorous and dauntless war heroes, stone pillars of the legitimate authority of our mighty sovereigns; in reverend and worthy clergymen, ardent soul-shepherds and torches of religious service; in honorable magistrates and rectors, distinguished above all by their unshaken fidelity and submission to the Counts of Flanders; and in learned writers of whose works many have survived the devastation of centuries.

"This distinguished and meritorious family is that of the Goethals, aboriginally from the capital of the Christian world, the Eternal City of Rome, and for a length of years residing in Emperor Carolus' Birthplace, the rich city of Ghent.

"For the sake of making better known the merits of this patriotic and pious family, I have here com-

piled a chronicle, which I offer to all my virtue-loving countrymen."

In 1839 there was published in Paris a large volume, in the French language, under the title:

ARCHIVES,
Genealogical and Historical,
of the
Nobility of France.
Edited by M. Lainé.

In this book there is a chapter of eighty-eight pages devoted to the "Goethals, Lords of Mude, of Niewlandt, etc., in Flanders," and beneath the title, a cut of the family coat of arms. The editor or compiler cites as the sources of his work the genealogy compiled in 1711 "out of original documents" by Pieter Andreas Goethals, "doctor in civil and penal law, who in 1690 was appointed by the King of Spain Counsellor of the Provincial Council of Flanders," and who may have had access to the writings of his predecessor, "Lieven Goethals, King at Arms of the Counts of Flanders, good genealogue, learned in the law and in several sciences, Latin poet . . . esteemed very highly by the Emperor Charles V, who was a mourner at his magnificent funeral at Ulm in Suabia in 1507."

M. Lainé cites also a Goethals genealogy published in 1744 and another in 1839, in which the "numerous monuments which attest the original grandeur of that family, its noble alliances, its continual participation in all the events which are remarkable in the history of Flanders, have recently been published by a pen wise and skilled, that of M. le Chevalier L'Évéque de la Basse Moûturie."

The Flemish and French genealogies are substantially the same, being based on common sources, but each contains some names which are not in the other. There is scarcely an entry in either that does not record a deed of valor by a knight, or the attainment of eminence by a scholar in the field of learning, or the possession of high rank in the Church for piety and wisdom. Simple, abiding, absolute in their compilers' faith, fairly amounting to adoration, in the valor, wisdom, and virtue of the persons whose lives and deeds they record. If they are persons in authority, they are entitled to blind faith and unswerving loyalty. Those who oppose them are infidels, and everything that is bad and despicable. T. A. L. Schellinck and M. Lainé anticipate and outdo the praises of the Old Canal Men. The Goethals cult was never born on the Isthmus, but like the Emperor Carolus, in the rich city of Ghent.

As history, this chronicle recalls Mowgli's comment on the story told by Hathi the elephant; it has lost no fat in the telling. Obviously, Pietro Bonicolli could not have distinguished himself in several tournaments in the tenth century, before tournaments were invented, nor would a Moslem of the eleventh or any other century offer up human sacrifices to the Prophet. Those little concrete touches were probably added at some time in the later Middle Ages, when men thought of Sir Hector of Troy as wearing plate mail with a plumed helmet from Pavia, and riding out to break a lance with Sir Achilles at the barriers before the Scæan Gate, and when Christendom was as eager to believe anything evil of the Moslems as it was to believe anything evil of the other side in the World War. Every age has its own folk-lore and mythology; today the Germans dogmatically assert that the builder of the Panama Canal was a German because Goethals is a Germanic name. It would be more logical to call him an Italian because of Honorius, or a Greek because of Eutrachelos, or a Frenchman because of St. Louis, or a Spaniard because of Charles V, or an Austrian because Flanders was once called the Austrian Netherlands, or a Belgian because it is now Belgium, or a Dutchman because there is a branch of his family at Amsterdam

from which Goethals at one time thought himself descended. He happened to be an American.

There is a familiar flavor of this modern, synthetic folk-lore that we call propaganda, about the Flemish genealogy. The extraordinary thing is that it is honestly labeled as such. Ghent was the center of the Belgian, Catholic movement against the domineering rule of the Dutch, Calvinist House of Orange in the lopsided Kingdom of the United Netherlands, from the post-war creation of that artificial monstrosity in 1815 to its violent rupture in 1830. Schellinck's avowed purpose of making better known to all his "virtue-loving countrymen" the merits of this "patriotic and pious family," his digging up of ancient wrongs, his closing reference to the "glorious revolution of Belgium" and his perhaps somewhat hopeful praise of the Waterloo veteran on the General Staff, all indicate the hard-working patriotic and pious propagandist so well known to us today.

But the very fact that this genealogist was appealing to local pride and prejudice would put him at the mercy of local knowledge. He could not safely supply Louvain with spurious scholars while its university records were still intact, nor so well-known a native son as Charles V with a fictitious king at arms. He would hardly dare refer to the tombs of

mediæval worthies to be seen in local churches, as, for instance, to the burial of the learned Doctor and Canon Gillis Goethals "in the Chapel of the Holy Three Kings in St. Bavon's which he had built at his own expense, rightly called the Goethals Chapel," unless he felt as secure as a biographer of Robert Fulton referring to the tombstone you may see through the railings of Trinity Churchyard as you walk up the north side of Rector Street toward Broadway. Finally, he would be cautious about inventing crusading heroes in Ghent, the mother city of crusaders.

Writing for edification, both Schellinck and Lainé, as well as their predecessors, must have left out all the unedifying details. Also, they concerned themselves solely with the aristocracy. Were there no sinners among all these saints, no commoners among the peers, no younger sons who had to go out and work for a living? If one pair of prolific Puritans who came to New England in 1636 succeeded in supplying the United States in 1886 with more than ten thousand of their descendants, then so virile a stock as that of Gerrem Goethals in the course of eight centuries must have added perceptibly to the well-known density of population in Flanders. It is even so. In some parts of the Low Countries,

Goethals are as easy to find as Jamesons in some parts of the Lowlands.

The first of the name to come to America was John Goethals, a woodworker by trade, in 1848. He found conditions in this country so satisfactory that he took out papers of citizenship. He married Marie Baron, a native of his own country, thus founding from the original stock the American branch of the Goethals family. Both came from the Belgian province of East Flanders of which Ghent is the capital.

George Washington Goethals was born in Brooklyn, N. Y., on June 29, 1858. He had an elder brother, John, born 1856, and a younger sister, Annie, born 1860. When George was eleven years old the family moved across the East River to New York, taking up their abode at No. 47 Avenue D, on the East Side, in what was then a quiet, dignified residential district largely occupied by men engaged in shipbuilding and allied trades. George, who had begun his education in the public schools of Brooklyn, continued to pursue it in the same schools in New York. Among his classmates was a lad named Andrew McAllister, who afterwards entered the Naval Academy at Annapolis, graduated in 1881, became a lieutenant in the United States Navy, retired in 1896, went back into active service in the

World War, and became a lieutenant-commander, retiring again at the close of the war. Young McAllister was a frequent visitor at the Goethals home and his recollections of its members afford excellent material with which to form an estimate of the home influence that surrounded George in his childhood.

Both parents were of the stalwart Flemish type —he, tall, blue-eyed, with a notable sense of humor, devoted to his family; she, a warm-hearted, domestic woman who "idolized Georgie," stimulated him in his ambitions, and encouraged his schoolmate, McAllister, also in his, urging him every time she saw him to work his hardest to get into Annapolis.

"To this day," declared Commander McAllister, "I look back to her with reverence."

George was a good mixer and popular with his schoolmates, though not a hard player, but one of the quiet, studious sort. Another quiet, studious boy of the same age and racial stock was then unconsciously forming his tastes and influencing his future life by reading and rereading Livingstone's *Missionary Travels* and Wood's *Illustrated Natural History* in the gaslit library of his father's brownstone front on East 20th Street. Copies of these books are kept on display there now, because of their known formative influence on Theodore Roosevelt. Did

Schellinck's *Goethals Chronicles* have a comparable effect on George Washington Goethals?

Unlike Roosevelt, he wrote no autobiography and hated to talk about himself. In some respects, Goethals was as thoroughly an introvert as the other was an extrovert. He was only too glad to help the public understand about the Canal, and almost fiercely insistent that some subordinate, whom Goethals disliked personally, be given full credit for the good work that he had done. But the first question about his own private affairs invariably brought down an invisible steel fire-curtain between the Colonel and the interviewer. He was as shy as he was proud.

He owned a copy of Schellinck's book and knew the contents, although he could no longer read it. Like most American-born children of foreign parents, he had lost their speech before he was old enough to realize the value of knowing more than one language. More exciting stories to tell or read aloud to a child, or tales more apt to leave a lasting impression than those in the *Goethals Chronicles*, would be hard to find. A boy always identifies himself with the hero of the story—especially when they both bear the same name. Those heroes of old were his own ancestors. Was he not a Goethals?

When he became a lieutenant in the United States Army, some time in the early 'eighties, George Goethals wrote to the head of one branch of the noble Belgian house to ask his assistance, as one potential kinsman to another, in establishing their relationship. There was no reply. The silence is ironic, when we consider how that young American lieutenant was to make their name world famous.

He, too, kept silence. He never forgot that men of his name had fought in the Crusades, but he never talked about them. On far less provocation most of us would become insufferable snobs, interminable bores, and supercilious ineffectives. Goethals, however, never seemed to feel the need of any sham romanticism as an escape from reality; he enjoyed and mastered life as he met it, on Avenue D or on the Isthmus. As naïvely innocent of the ways of courts as Benjamin Franklin, when an empress once graciously extended her hand for him to kiss, he grasped and shook it heartily. He did not ape the external mannerisms of those mediæval knights whose names he bore: he did something very much harder and finer—he lived up to their ideals.

A very wealthy and celebrated contractor went to Panama when the Canal was building. Asked what he thought about it on his return, he said: "It's a big

job, but that man Goethals is a damned fool. I offered him a million dollars to come to me, and he declined it." [1]

When one of his friends spoke to him about this offer, the Colonel smiled and said: "All my training, all my education, has been at the expense of the public, in the free schools of Brooklyn and New York, in the City College of New York, and the United States Military Academy at West Point. I owe it to the public to stay here until the Canal is finished."

It would be hard to find a better modern equivalent than this to a knight's "unshaken fidelity" to his sovereign, or to the Primus in Philosophy emptying the ewer of gold and silver coins at the city gate. Was it the result of heredity or the effect on a boy's mind of stories of idealized heroes? Whatever it was, it moved mountains.

One thing is certain about the Flemish ancestors of George Washington Goethals, whether they were captains of the Counts of Flanders or gildsmen of the communes of Ghent, they must have been a strong, upstanding breed. Their American-born descendant was six feet tall, well-built and handsome,

[1] This anecdote is supplied and vouched for by Rear-Admiral Willard Herbert Brownson, U.S.N.

ruddy, blue-eyed, and flaxen-haired. Long after it had whitened with age his hair curled crisply in ringlets that at times made his face look oddly like a boy's.

"I can remember but one incident in his college life that was unusual," writes one of Goethals' classmates who entered the City College with him in 1873. "That was in the room where old Professor Koerner lectured on æsthetics and the theories of beauty. The lecturer had just stated that youth was beautiful in itself, with the carnation of the lips, the smoothness of the skin, and the abundance of the hair, and that a certain youthful ungainliness of limb was present in youth, but that it might give promise of a maturer good form. Whereupon he turned to George W. Goethals and said, 'Sir, will you stand up?' Goethals stood up. Koerner turned to the class and said: 'Here is a good example of what I say.' Goethals blushed. The professor said: 'Sir, will you sit down?' and the episode was closed."

Considering the sensitiveness of an adolescent boy cursed with a pretty face, this was a decidedly brutal performance on the part of the instructor. As a rule, however, George was very fortunate in his teachers. In the grades, he had come within the influence and under the instruction of that rare and beneficent be-

GEORGE W. GOETHALS AT THE AGE OF FOURTEEN

ing, the born teacher who loves his work and finds his greatest joy in creating and stimulating in the minds of his pupils a love of learning. Such a teacher was Nathan P. Beers, the principal of Grammar School No. 15. The quick intelligence, eagerness to learn, and determination to get on in the world displayed by young Goethals greatly interested Mr. Beers. His interest in the boy followed him to college, and when an opportunity suddenly came for him to do his former pupil a service Mr. Beers was quick to grasp it.

George had not yet decided on what career in life to adopt, but on one point his mind was clear and firm—it must be in one of the established professions. At one time he favored medicine, at another, law; later, after he had discovered his taste and ability for mathematics, he inclined strongly to engineering. Even before he graduated from grammar school he began to earn and save money to pay for his own professional education. Often throughout his career at college he worked evenings, Saturdays, and vacations at whatever job he could find: addressing envelopes and wrappers, carrying messages from office to office, as hundreds of boys were doing in that pre-telephone age, sometimes serving as assistant book-

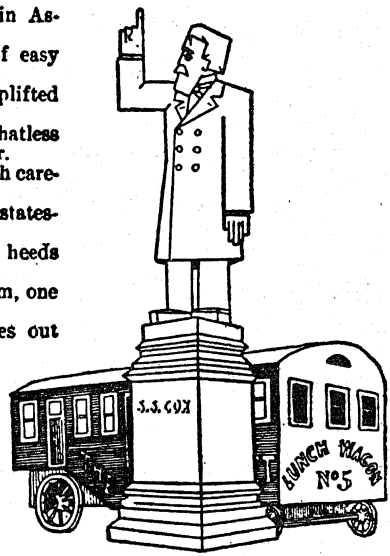
keeper or cashier, always finding time to study and keep his marks up to high standing.

In January, 1876, it was learned at the college that there was a vacancy for an appointment to West Point, for the appointee sent up by the representative of the district had failed in examination. The West Point tradition was strong at the City College. Its first president, Horace Webster, was a graduate of West Point in the Class of 1818; its second president, General Alexander S. Webb, who was in office in Goethals' time, was also a West Pointer and had distinguished himself at Gettysburg. The advanced mathematical course, the system of discipline, and the methods of instruction at the City College were all cut to the West Point pattern.

Mr. Beers heard of the vacancy and went swiftly and efficiently into action. He got the approval of President Webb and the endorsement of the trustees before he went to interview the representative, the Honorable Samuel Sullivan Cox, one of the most imposing of the long-bearded, long frock-coated statesmen of the Gilded Age. An unlucky reference to the flaming splendors of the sunset sky had branded him with the nickname "Sunset" Cox. His very real services to the underpaid and overworked letter-carriers were cruelly rewarded by a fearsome bronze statue

of himself as the "Postman's Friend," that inspired Gelett Burgess to sing:

ALONE, forgot, in Astor Place
Behold a form of easy grace!
Appealing with uplifted finger,
Heartless and hatless must he linger.
The motorman, with careless eye
Passes the famous statesman by;
No hansom cabby heeds his call—
They disregard him, one and all.
The last car passes out of sight;
Poor Sunset Cox must spend the night.
He's lucky not to be alive!
No car will stop, howe'er he strive,
Except Lunch Wagon No. 5.



Mr. Cox had already announced that the next appointee to West Point from his district would be selected through competitive examination among the pupils of the public schools. Mr. Beers submitted the school and college records of Goethals, with the recommendations he had secured. Mr. Cox said that he would appoint him if a guaranty would be given that if admitted he would be a graduate. The guaranty was given. In view of his school and college records,

competitive examination was waived and he was given the appointment outright.

It came in good time, for the boy's health was breaking down under the double strain of studying and working. General Webb had urged him to get the West Point appointment because it "would be a health-builder" and he could take up medicine and surgery after graduation. At the time Goethals was in his fourth year at the City College and would have graduated in June, but he left in April to enter West Point.

Goethals always held his college days in grateful remembrance, and whenever in after years he was able to attend its Commencement exercises, he did so, invariably taking his place modestly among his classmates, shunning the recognition which would have summoned him to a position on the platform and in the company of what he termed the "wax-works."

At the Commencement exercises of September, 1928, the year of his death, the Associate Alumni of the City College presented the institution with a bronze bust of Goethals. In making the gift, Sigmund Pollitzer, the president of the organization, said:

"This bust, Mr. President, is not intended as a monument to his greatness. He has builded his own

imperishable monument at Panama. Placed where the youth of this city will have it before their eyes, this portrait may serve as a reminder that opportunities for the greatest service to mankind are open to everyone who has the courage, the industry, and the will to serve."

CHAPTER III

WEST POINT HAS A HAPPY NEW YEAR

ONE, two, three, four; one, two, three, four; crunch, crunch, crunch, crunch. In formation or out of it, on the Academy grounds a cadet must walk in a military manner, to the cadence of quick time. Two sets of footsteps meet at the junction of two paths; two gray-overcoated figures march briskly forward together, their polished black heels coming crisply down on the frozen gravel. It is Christmas week of '79, and these are two cadets called "Goat" and "Stub."

"Goat" is Cadet Captain Goethals, "Stub" is Cadet Private Hewitt, both first-classmen. Only a few months more and they will doff the cadet gray to don the army blue.

"I've been figuring it out, Goat, that by rotation you'll be officer of the day on New-Year's Eve."

"Yes, unless somebody falls sick, I'll be O.D."

"Pity you'll miss the hop, Goat."

"Yes, sad pity, Stub."

"But the guard-house is a nice place for the O.D. to sit and bone. Burn the gas and sit there and read, right up to midnight—if you want to, Goat."

There was an intonation to the final conditional clause that made Goat smile inscrutably down at Stub, who was looking up to Goat as he always did in every sense of the phrase. It had been so ever since they were plebes together, when Hewitt had been a lowly Sep and Goethals an exalted Juner. The Juners of '80 were the Juniest in all West Point history, for they had entered prematurely in April of '76 for a concentrated dose of military to make them fit to be seen at the Centennial. Squad drill from morning till night; four men fainted from sheer exhaustion the first day the guns were issued. Ten red-hot weeks of perpetual parade at the Centennial—and then some smart government clerk figured out that because they had not taken the oath until June they were not legally cadets at all while they were in Purgatory and must have those two months' subsistence stopped out of their pay—and what that did to a man's second-year furlough money! There are white-haired generals still swearing about that slimy trick today. Most of them took it out on their wretched classmates who shambled sheepishly in in civilian clothes, that September.

Hewitt saw Goethals for the first time in French section, when Captain Wood asked, "Has anyone here ever studied French before?"

One tall plebe stood up.

"Where, Mr. Goethals?"

"In the City College of New York, sir," the tall one replied, with no military snappiness whatever, but in a slow, musical drawl that was no more an imitation of the Southern drawl than it was like the orthodox East Side accent. Where on Avenue D did Goethals learn that manner of speech that he never unlearned?

Hewitt, whose own home district lay far in the hinterland, thought him a dude from the city.

But presently he discovered that the tall, handsome dude never hazed Seps, but, instead, treated Hewitt as a man and a brother. So, greatly daring, one day he bobbed the other's name to "Goat" and promptly received his own nickname in return. Goat and Stub they will be until the class of 1880 has held its last reunion.

Goat never hazed Seps, nor, when he became a yearling corporal, did he ever haze plebes. Yet a generation later, on the Commencement day when his son, George R. Goethals, became a shiny new yearling and was awarded his chevrons by a com-

mandant who belonged to the class of '82, he received this warning with them:

"Mr. Goethals, if I ever catch you looking at a plebe with that in-fern-al sneer with which your father used to smile at me when he was a corporal, I'll break you!"

Even as a cadet, George W. Goethals was known as a man of many smiles; also as one who could laugh more inside and less outside than anybody else. That infernal sneer must have been the official smile of a new and somewhat uncertain yearling corporal. He dropped it long before he became a cadet captain, and no one has seen it since. Certainly there could have been no official sneer in the smile that he bent on Stub Hewitt that December day in '79.

The word was passed among the initiate that Goat was to be O.D. on New-Year's Eve, and that he was pledged to sit and bone in the guard-house until midnight.

The winter afternoon darkened to early twilight. "Release from quarters" sounded. Goethals closed his Mahan's *Engineering* and rose from the study table in the room he shared with Johnny Chamberlain, who was to become Inspector-General of the Army in the World War. Placing the text-book precisely in its proper place on the shelf, he began to

pull on his caped gray overcoat. Chamberlain, still puzzled by a long, torturous problem, looked up with honest envy. Goat never boned except in study hours. Goat had a brain that ate up problems as his namesake might have gobbled the paper they were written on. He had stood second in every annual class examination in every subject except in the one where he really wished to excel—engineering. If he had cared to bone, Goat could have stood first in everything else as well, so his room-mate believed and declared.

But Goat took his work, as he did everything else at West Point, very easily. He found the system of study and recitation exactly what he had been accustomed to at the City College, but here he was competing with boys of his own age instead of older men, and without working in outside hours. In this military monastery all were equals in wealth and poverty, down to the authorized monthly issue of a pound of canteen tobacco and a standard red-clay pipe with a long reed stem. Later, the consumption of tobacco in any form became absolutely forbidden. In the 'seventies, however, as today, a cadet might smoke during release from quarters. But for some quaint reason known only to the prohibitory mind, he might smoke it only in the standard pipe, not in any other kind

of a pipe, and never in the form of a cigar or cigarette.

Unwrapping the newspaper that had come in that morning's mail, Goat found the usual supply of cigarette papers and stowed them neatly under the sweatband of his little gray forage cap. He went for his usual evening walk, swinging along, erect and vigorous, no longer an overgrown, stoop-shouldered adolescent, but a superbly strong man. Impeccably correct and according to regulations in every detail, still he was not in the least what cadets and enlisted men call "military." There was nothing of the strained, brusque rigidity of the Prussian *Wachtmeister* about the cadet captain, but an assured and supple ease. Employing the same smooth efficiency with which he drilled B Company or made a max in engineering, Goat rolled and smoked five cigarettes without being spotted by a "tac" or acquiring a single demerit. He was at ease in Zion.

Holy John was preaching in the chapel—the Old Chapel at West Point, one of the two places on earth where you may see the captured colors of a British regiment among the battle trophies. The battalion was hanging on the chaplain's words with flattering attention, for there were bets on as to which one of Holy John's stock sermons was due this Sun-

day. Like officers of the day, they came by rotation. Would it be the outcast female? No, it was going to be "That escutcheon" again.

Visitors find it impressive, that one blank shield on the Old Chapel wall. Washington, Wayne, Knox, Sullivan—every major-general of the Revolutionary Army is commemorated there, except the one who led the decisive charge of the decisive battle of the war. An honored place for the fighter's shield, but the traitor's name is erased.

"And if that man whose escutcheon hangs there had had a sense of honor . . . " Outwardly attentive to Holy John's well-rounded and too-familiar phrases, Goat wondered resentfully why the older men had to keep talking *all* the time about that sort of thing. If he ever came back here and sat up on the platform with the rest of the wax-works on Commencement, they would never get him to make one of those damn speeches.

(On June 12, 1912, Colonel Goethals delivered a most inspiring address on honor and loyalty to the graduating class on Commencement Day. Ordered to be printed; H. R. Document No. 904, 62nd Congress, 2nd Session.)

New Year's Eve. The Officer of the Day is sitting in the gas-lit guard-room, alone. Guard-mount has

been held, but followed by immediate dismissal, according to winter custom. Walking post in halls of barracks is done only until tattoo sounds at 9:30 P.M. The plain is drifted deep tonight; the eight doors opening on it from cadet barracks are bolted and barred. The guard-house is over on the other side of the barracks, across the area.

Down at the hotel the band is playing the "Blue Danube." Goat, reading Mahan on *Fortifications and Stone-Cutting,* catches a wind-blown strain of music and smiles in utter contentment. He never goes to hops. He has never learned to dance, though dancing lessons are as compulsory as any other drill. He falls in with the rest and marches to gym, but he never pairs off with anybody, just sits and smiles, and somehow Proff. Vizet never seems to see him. The only duty Goat ever ducks is learning to dance. Stub calls him the president of the Bachelors' Club. Handsomest man at the Point and incurably girl shy.

Shy with men, too; very diffident about coming into a gathering where there are any strangers. Never campaigns for office, but has been president of his class ever since plebe year. The class ring is of his designing. Fifty years afterward Stub will declare there never was an election; Goat simply usurped the office and never gave it up. Goat will smile.

Tattoo—taps—the men from the hop report in. All lights are out except the gas-jet in the guard-house, where the O.D. is writing a letter home asking for more cigarette papers. He wants a smoke badly and could easily sneak one now, but you don't sneak when you're on duty. He hears a slight noise, and looks up sharply to see Fat Stewart peeking in at the guard-house door, his bare head tousled, his bare shins showing pink between the overcoat skirt and slippers. That's all right, but Fat has no business around the guard-house after taps. He is Goat's oldest friend; they were playmates on Avenue D, classmates at City College, before they went up together to the Point. Their eyes meet; Stewart shrinks into the night and flees back to barracks. He reports a failure. Instructions follow: "Get your mask on and go stand sentry at that door. Let Stub in when he comes, then slam the door and bolt it no matter who's after him!"

The dark corridors are full of mysterious preparations.

The clock strikes midnight. At the first stroke a thirty-pounder Parrott roars from the siege battery, small-arms rattle, fish-horns blare, and a yell goes up from cadet barracks:

"Yeh-eh-eh! Happy New Year!"

Blue-lights and port-fires blaze along the battlements, lighting up the area with a theatric glare. Here comes Goat! Here comes Flaxey the "tac"! Let 'em have it! Roman candles and three-legged sky-rockets are aimed as straight as eye and hand can train them on the gray overcoat and the blue overcoat advancing side by side. Tradition says that Goat never flinched, but that when a rocket went between Flaxey's legs he outjumped the orderly. They found the doors barred against them.

"Orderly!" shouted the infuriated tactical officer, "Go and get me a——"

The explosion of a ten-inch firecracker on the ground between them obscured the end of his sentence, but the orderly saluted and departed at the double. A cadet leaned out of a first-floor window beside the door and told Flaxey all about his morals and ancestry, in a voice that carried through the thunder of the cannon-balls cascading down the iron stairs.

"Mr. Goethals, who is that man?"

"I don't know, sir. He is wearing a mask."

They were all wearing masks, made from strips of torn sheeting. It might have been Dickman of the Third Division at the Second Marne, the Fourth Corps at St.-Mihiel, the First Corps in the Argonne,

and the Ameroc on the Rhine. Was it Bailey of the Eighty-first, Strong of the Fortieth, or Bell of the Thirty-third Division of the A. E. F.? Perhaps it was Johnnie Blake, the commander of the Irish Brigade that fought for the Boers in '99. But it could not have been the Transport Q.M. of the *Leviathan*, for he was holding the back door open for Stub Hewitt and the other hero who had loaded six and fired five of the siege-guns. Back they scuttled across a quarter-mile of moonlit, snow-covered plain, with cold fear in their hearts; but they reached the barracks unseen and darted in, in time to see the orderly come panting up on the other side of the building and politely offer three parlor matches to Flaxey, who threw them down on the snow and did a war-dance on them.

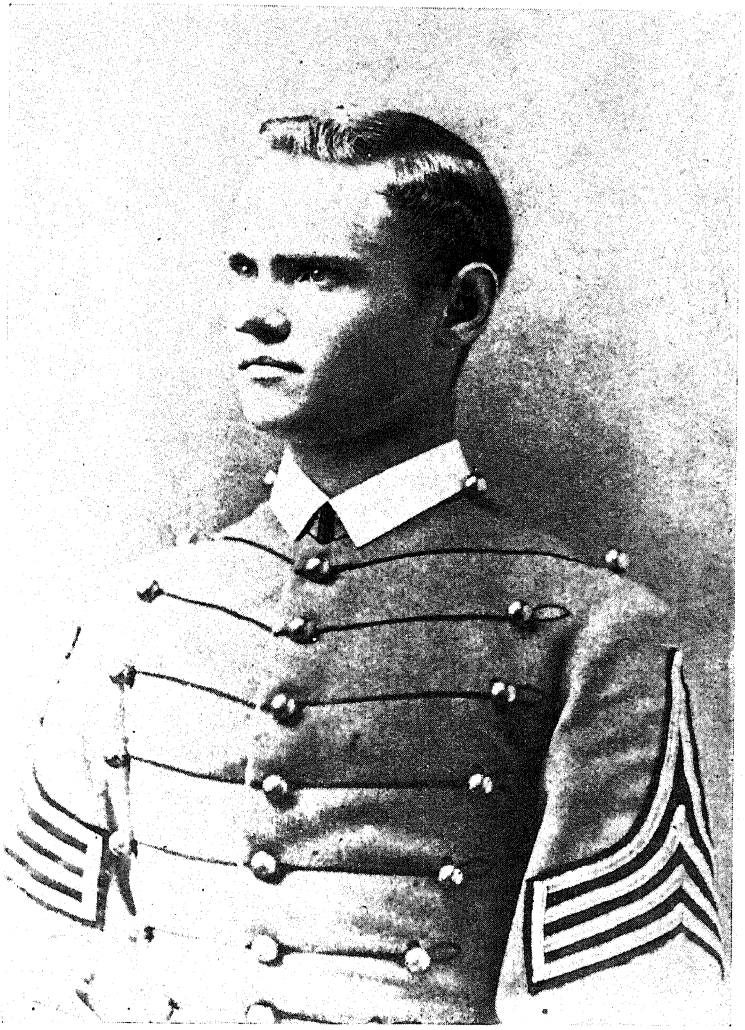
"My God!" shrieked the impassioned "tac." "You damn rookie, I told you to get me an AX!"

Turning to the calm and courteously attentive O.D., he ordered:

"Beat the long roll!"

"*That's* what Fat Stewart must have been up to," said Goat to himself, as he ceremoniously saluted and turned away. "Trying to sneak the drums out of the guard-house."

Goat knew where the "hell cats" sleep of nights;



Geo. W. Goethals

Cadet U. S. M. A.

he had these members of the fife and drum corps out in the area and beating the long roll before the last of the fireworks had been expended. The barracks doors swung open, the four companies fell in on the area by the light of the moon and the dying glow of the blue-lights and port-fires. The area was blue with "tacs" of all ranks—Grandma the commandant was there; Major-General Schofield the superintendent was there. But not one solitary cadet commissioned officer was there except the impeccable Cadet Captain Goethals.

"Form a guard!"

Goat formed it and led it into the Fourth-of-July-smelling corridors to hunt for the lost division and subdivision commanders. Each and every one was found effectively locked into his room by means of a long-barreled '73-model Springfield placed across the frames outside and securely lashed to the knob of the inward-opening door. The released cadet officers took their posts and the roll was called.

"*All* are present, sir!"

"BOOM!" came the belated but hearty roar of No. 6 gun of the siege-battery.

"Call the roll again!" commanded the superintendent. "See that no one answers to another's name."

"*All* are present, sir!"

It was, on the face of it, nothing less than a miracle.

Behind a tree in Flirtation Walk a hapless wretch was gibbering at the moon. Unlike the other officers who had sped to the area at the sound of the first gun, this member of the Department of Ordnance and Gunnery had been drawn by professional instinct to the siege-battery. But by the time he arrived he had completely forgotten what he had come there for; he and the rest of the Bachelor Mess had been having a pretty adequate New-Year's party of their own before the cadets sounded off. Through the mists of bewilderment he suddenly recognized a lanyard hanging from a gun-breech and obeyed the idiotic impulse to pull it. For years afterward he maintained the silence of an oyster.

Up in one of the turrets on the roof of cadet barracks was a small coehoorn mortar from Trophy Point.[1] Nobody could make it go off on New-Year's Eve, but somebody succeeded in firing it about seven o'clock next morning. This final piece of impudence settled it. All hops were canceled, all leave was stopped from then until April, except for a very few cadets whose innocence was above suspicion. Goat was one of these, but neither he nor anyone

[1] Some say it was the saluting gun. Accounts differ.

else thought it good cadet form to make any use of this special dispensation. Nobody could be found guilty of anything and nobody was expelled. The incident remains to this day the most outstanding prank in cadet history—a prank for which no punishment could be inflicted nor a culprit found.

Like Robert E. Lee, Goethals achieved the amazing record of thoroughly enjoying himself at West Point without having a single demerit against his name at graduation. This was due to the system then in vogue, whereby a cadet who went for a certain period without receiving demerits was entitled to have a certain number of past demerits removed from his record. Thus it was possible, as in this instance, to have a clean record at the completion of the course. Even so, the achievement was very rare.

Immediately after his graduation, Goethals, primarily out of a feeling of gratitude and possibly from a desire to show that he had fulfilled the pledge he had given at the time of his admission to the Academy that he would remain and graduate, called upon his Congressman to thank him for his appointment. Sunset Cox insisted upon giving him a letter of introduction to William Tecumseh Sherman, although Goethals protested that he did not wish to thrust himself upon the General Commanding the

Army, who, he felt, would not care to see him. After hesitating for a time, he fairly screwed up his courage and presented the letter in person.

Sherman received him cordially, and in the course of conversation asked the newly-commissioned second lieutenant what branch of the service he had entered.

"The Engineers, sir."

"Oh, hell!" said Sherman. "However, in spite of that I hope you may do some good for your country some day."

CHAPTER IV

EARLY ENGINEERING WORK

UPON graduation in June, 1880, Goethals was assigned to the Corps of Engineers, with the rank of second lieutenant, and was retained at the Academy during the summer and autumn as Assistant Instructor in Practical Astronomy. In October he became a student officer in the Engineer School of Application at Willets Point, New York (now Fort Totten), where he remained about two years.

"Here the subalterns of the recent classes met for the first time as officers, and we were naturally interested in each new comer," writes Colonel Fiebeger of '79. "It was not long before we discovered in Goethals the qualities that had made him popular with his class. With a winning personality, he was dignified yet friendly, modest but self-confident, honorable and upright, cheerful in disposition, quick at repartee and somewhat sarcastic in a pleasant way, military in carriage and neat in dress, never coarse in language or thought. His loyalty and prompt

obedience made him popular with his commanding officers. His temperament was artistic and his tastes were for the beautiful in Art. He loved music, had a fine tenor voice, and thoroughly enjoyed the opera at the old Academy of Music in New York which many of us attended several nights a week during the season."

In October, 1882, he was sent as engineer officer to the Department of the Columbia, with headquarters at Vancouver Barracks, Washington Territory, General Nelson A. Miles commanding. There Goethals was engaged in reconnaissance, surveys and astronomical work. Soon after his arrival a freshet washed out the bridge over the Spokane River that gave the only easy access to Fort Spokane, and he was sent to replace it as fast as possible.

"That was the hardest job I ever tackled," Goethals declared, forty years afterward. "Everything else since has been easy as compared with that. It was not much of a bridge that I was ordered to put up—only a wooden truss bridge with a one-hundred-and-twenty-foot span. There was nothing novel about that; many such had been built. But I had never built a bridge and I did not know much about bridge-building. That was part of my trouble. In addition, the bridge was far away from the sources of supply

of everything excepting wood, and I was expected to do my work in a hurry. That was far and away the hardest bit of work that has ever come to me. It might not have been hard for an experienced bridge engineer. He would have known exactly what to do. I did not; I had to find out as we went along. I read books all night and gave orders all day. However, we built the bridge—and on time. Those were the orders and they were followed. But no job since then has ever seemed so hard as that one.

"That is the way with engineering; it is scarcely ever the big, spectacular things that really count with an engineer. . . . Mere size sometimes matters; more often it does not. It is the difficulties overcome that make for greatness. . . . Nothing is hard if you know what you are doing. What makes my first bridge so stick out in my memory is that I did not know what I was doing. The man who is entitled to most credit is the man who does something, no matter how crudely, for the first time. Those who come after him are directors or administrators—not originators." [1]

Presently William Tecumseh Sherman, the General Commanding the Army, came through on a tour

[1] Article by Samuel Crowther in the *American Magazine*, January, 1922.

of inspection. Greatly to Goethals' surprise—considering Sherman's language at their previous meeting—the general insisted upon his accompanying him throughout his visits to the various posts in the Northwest. Perhaps the "Oh, hell!" had been less of a reflection on the new subaltern's personality than an old Flying Artilleryman's disgust at a likely young fellow's choosing the Engineers instead of the Line.

"I watched young Goethals with great interest," Sherman wrote in a letter in 1884, "because of his striking resemblance to General McPherson, a great friend of mine, and I predicted for him a brilliant future." In another letter written about the same time the general declared: "He (Lieutenant Goethals) is the finest young officer on this coast."

The young officer's experience with General Miles was less agreeable. In May, 1884, a few months before Lieutenant Goethals was transferred from the Department of the Columbia, General Miles offered him a detail to Alaska, which he declined. In the summer of 1883 a lieutenant on the personal staff of General Miles, whom he had sent on an exploring expedition in Alaska, had resigned his position on the staff, to the general's great displeasure. This lieutenant had informed Goethals that a well-armed

force was necessary for the work, but that Miles had offered him only one soldier and a doctor as an escort. Miles sent for Goethals and proposed that he take up the unfinished work. The conditions under which the general made his offer are set forth by Goethals in a letter he wrote on May 4, 1884:

"General Miles sent for me and offered me the detail but I did not care to accept it. He said he thought I was making a mistake, that I had plenty of time to reconsider the matter, and even now it was not too late to change my mind. I told him I had no reason to change my mind, since I gave him my decision, that if he wished me to go he had only to issue the order; this he did not care to do because something might happen, 'the chances are even that you may be taken prisoner or killed, and I do not care to have the responsibility rest on my shoulders.' He would not warn any officer who showed any inclination of going against the dangers, for the officer should find out the dangers for himself. He unbosomed himself to some extent by saying that the duty was a very disagreeable one, tedious and difficult, and General Pope had agreed with him that no one be sent except one who was perfectly willing to do it."

This incident is of value as showing the early pos-

session of what became life-long traits in the character of Goethals. Having reached a decision, he stuck to it. Always obedient to definite orders from superiors, he had no use for power without responsibility nor responsibility without power. His pet detestation was that hoary iniquity of the Service—the passing of the buck.

In the summer of 1883 there was a visitor on Officer's Row—Miss Effie Rodman, daughter of Captain Thomas R. Rodman of New Bedford, who had come out to the Far West to see her brother, Second Lieutenant Samuel Rodman, a West Pointer of '82. Bachelor officers came to call, including the erstwhile president of the Bachelors' Club, who lost his qualifications then and there. They were married in New Bedford on December 3, 1884. Their first child was born at West Point, March 4, 1886, and christened George Rodman Goethals. A second son, Thomas Rodman Goethals, was born December 14, 1890, at New Bedford.

In September, 1884, Goethals was recalled from the Department of the Columbia and assigned to duty as assistant to Colonel William E. Merrill, who was in charge of Ohio River improvements, with headquarters at Cincinnati. In entering upon this service, Goethals, quite unconsciously, was taking an

important first step in the acquirement of that special knowledge and practical experience which later fitted him preëminently for the great task at Panama. His corps had been doing that sort of thing for nearly a century. To end the bitter interstate squabbles over waterways, so important in the eighteenth century, the Constitution gave control of navigable waters to the Federal Government. West Point was the mother of American engineering, civil as well as military; year after year her highest-ranking graduates went into the Corps of Engineers and the never-ending battle with Old Man River and his tributaries.

"The U. S. Military Academy at West Point," said Goethals in a lecture delivered to a body of engineering students some time after his retirement from the Army in 1919,[1] "was established under the direction and guidance of French military engineers. It was the first and for some time the only, technical school in the United States, and while it was founded as a school for military engineers and artillerists, its earlier graduates took high rank among the civil engineers of the country. Its graduates made the surveys and reconnaissances on which the first transcontinental railroad was located and constructed;

[1] The manuscript of this speech was found among his personal papers, after his death, but the place and date of its delivery are unknown.

they began the works which subsequently developed into the U. S. Geological Survey and into the Coast and Geodetic Survey, and when, to satisfy the demand, technical education was undertaken by the colleges and universities, its graduates were found among the instructors and professors; they still have charge of the design and construction of the fortifications of the country as well as of the improvements of its rivers and harbors."

In the eighteen-eighties, Colonel Merrill was the recognized highest authority in the country on the construction of locks and dams. The Ohio River work consisted mainly of survey and the construction of dikes, dams, and locks. When Goethals reported to Colonel Merrill for duty, that officer addressed him a few frank remarks on the subject of shoulder-straps. He would find them a handicap if he insisted upon wearing them, but if he would forget them and be willing to start under civilian assistants, he could learn something of the practical side of the job; otherwise he would remain in the office and do paper-work. Goethals promptly decided to put on overalls.

He began as rodman on hydrographic surveys, and gradually advanced to the position of chief of surveying party, foreman of concrete work, and chief of construction work. By actual experience on the

job, he learned things you never can learn from text-books or in the drafting-room. He was preparing himself against the time, a quarter of a century away, when Shorty of the car-repair shops was to say that there wasn't a tool in the shop the Colonel didn't know—and know right. Also, Goethals had learned the value of not always wearing shoulder-straps—even figuratively.

After being a little less than a year on the Ohio River service, Goethals was detailed, in August, 1885, to duty at West Point, first as Instructor and then as Assistant Professor in Civil and Military Engineering. Major-General C. D. Rhodes, who was one of his cadets in the 'eighties, tells this anecdote of Goethals in the class-room:

"In the Old Academic, rickety with age, his section room had a tiny knothole in the middle of the creaking floor. Lieutenant Goethals, resting lazily back in his chair with both eyes half-closed, would watch that knothole steadfastly while we cadets made a stab at reciting. Ever and anon a tiny mouse would run out of the hole a few inches, whereupon Goethals would snap a piece of chalk at the mouse from a crayon ready at hand. The cadet at First Front Board, his discussion rudely interrupted by this bombardment of the mouse, would hesitate and lose the thread of

his engineering problem. Always at this psychological climax Lieutenant Goethals would say: 'Never mind the little mouse, Mr. Blank; go on with your discussion just as if he never existed.' Of course, by this time the entire section was in silent hysterics."

During his occupancy of this position, Goethals had among his pupils a colored cadet named Charles Young. When Young died in 1922, the *Annual* of the Association of Graduates of the Academy contained an obituary of him from which the following passage is taken:

"About the time of graduation of his class, in June, 1889, Cadet Young was declared by the Academic Board deficient in engineering, and he narrowly escaped being dropped from the rolls on this account. But both officers and cadets had been much impressed by his steadfast perseverance and tenacious resolution, and the result was that he was permitted to remain at the Academy during the summer of 1889 and be coached in his deficiency by the very instructor who had declared him deficient. This instructor, whose high sense of justice and fair play led him to devote two summer months to helping a Negro lad overcome a deficiency in class standing was the present Major-General George W. Goethals. On August 31st, Young was graduated, as of the Class of 1889."

Young's subsequent record entirely justified the assistance given to him to attain his West Point diploma. His service included duty at home and in the Philippines with the Seventh and Ninth Cavalry; with the General Staff; as our military *attaché* in Haiti and Liberia; as Lieutenant-Colonel of the Tenth Cavalry during the Punitive Expedition under General Pershing in Mexico in 1916; and the conclusion of the World War found him recalled to active duty from the retired list and in command of the Development Unit at Camp Grant, Illinois. In spite of the social handicap imposed on a member of his race, Colonel Young won and commanded throughout his career the respect and admiration of superior and subordinate.

In August, 1889, Goethals was assigned to duty as assistant in the design and construction of locks and dams on the Cumberland and Tennessee Rivers, under Colonel J. W. Barlow, with headquarters at Nashville. Then came his first independent command, his first big job in the field. In January, 1891, he was made engineer in charge of Tennessee River improvements, which included the completion of the Muscle Shoals Canal and the design and construction of the Colbert Shoals Lock. His headquarters were to be at Florence, Alabama. When General Thomas

L. Casey, Chief of Engineers of the Army, placed Goethals in charge of this work, he told him that several dates had been assigned for the completion of the Muscle Shoals Canal and its opening to navigation, but that in each instance the opening had been postponed. The latest date fixed was one that came just before a hearing in court on a rate case to be tried at Chattanooga, and the existence of open water through the canal was needed to secure reduction. General Casey instructed Goethals to have the canal open to navigation before that date.

Goethals organized the work in two shifts, day and night, himself taking personal charge of the night shift. He completed the canal in time to put a boat through from St. Louis with a load of supplies which reached Chattanooga the day before the date set for the hearing.

Captain Goethals, as he was now, continued in charge of the Tennessee work for nearly three years, maintaining the river in a navigable condition and operating the Muscle Shoals Canal. Here he had his first experience in railroading, for he built and operated a railroad fourteen miles long that was used originally for construction purposes and ultimately for carrying supplies and towing ships through the canal.

In his spare time he kept an eye on the Alabama carpenters who were making the main staircase and other parts of the interior woodwork for the house he was having built in New England. Mrs. Goethals was New Bedford born and had spent a great deal of her girlhood on the island of Martha's Vineyard, off the south shore of Cape Cod. Goethals had gone there with her for the first time in the summer of 1889, and for the next four years they took rooms in private houses or at the hotel. Becoming enamoured of the place, Captain Goethals bought a lot in Vineyard Haven, in the summer of 1893, and had a very substantial frame house built in time for the family to occupy it in the summer of '94. Thereafter he made Vineyard Haven his legal residence and his home. He never voted anywhere else. The Goethals were no longer summer people—they were folks. He belonged to the local Barnacle Club. After he had been for seven years on the Isthmus and won world-wide fame, he came back for a short visit, and one of his fellow members, a very retired sea captain, asked, affably, "Where be ye now, Cap?"

Returning to the 'nineties, it was at Colbert Shoals on the Tennessee, when he designed and built the Riverton Lock, that Goethals showed those qualities which lifted him ultimately to the undisputed leader-

ship of his profession. When he took charge of the Colbert Shoals work, there were in existence on the Tennessee River eleven locks in which the height of the lifts ranged from twelve to fourteen feet. It was proposed to construct at Riverton two locks, each with a lift of thirteen feet. Captain Goethals recommended something new and unheard-of—a single lock with a lift of twenty-six feet. In spite of vigorous opposition, his plan was approved. Up to that time no lock approaching twenty-six feet in lift had been constructed in the United States or elsewhere. Goethals designed it, built it—and it worked. It established a precedent for high-lift locks which became so well fixed and so generally followed that no serious opposition developed when, in 1906, it was proposed to erect at Panama three locks in flight with a combined lift of eighty-seven feet. Riverton broke trail for Gatun.

The contract for its construction was awarded to the lowest bidder, in spite of the vigorous protest of the captain, who had satisfied himself that the bidder was incompetent. Scarcely had the work begun before this incompetence was demonstrated. Solid rock was the only possible foundation for the massive lock walls, and to reach this it was necessary to pass through about forty feet of earth, the lower half of

which consisted of quicksand. The contractor simply drove sheet piling around the entire area to be excavated. As soon as he had dug a few feet into the quicksand, the entire body of sheet piling collapsed into the hole, carrying with it slides which extended thirty feet and more beyond the line of excavation and entirely around the lock-pit.

Captain Goethals immediately recommended the annulment of the contract and the completion of the work by hired labor. Both recommendations were approved and the captain took personal charge of the work. He placed a civilian assistant named Williamson in local charge, cleared away the scrambled mess which the discharged contractor had left, and with Williamson's aid worked out a method of sinking test-pits down to bed-rock.

Never before had Captain Goethals attempted this sort of construction-work. The quicksand leaked in through cracks in the sheeting, it boiled up through the open bottoms of the pits—it even flowed in through nail-holes. The surface soil was undermined by the flow of the quicksand and broke away around the pits, falling against the sheeting and straining it to the limit, seriously frightening the excavating crew.

Looking down into a test-pit one morning, Cap-

tain Goethals saw a sight that shocked him very greatly. There was his assistant, Mr. Williamson, down in the pit and working, spade in hand, side by side with a gang of Negroes shoveling sand into the buckets of the hoist. Surprised as he was at Williamson's behavior, the captain said nothing at the time, for you should not reprove a subordinate before his men. But afterwards, when the two were at dinner, Captain Goethals took the civilian to task.

Williamson must have looked as uncomfortable as he did long afterward on the Isthmus when the Art Commission came down from Washington, took one look at the hollow ramps soaring up from level to level at Pedro Miguel and Miraflores, and congratulated the astounded old civil engineer on having built the most beautiful flying buttresses since the days of the mediæval cathedral-builders. For weeks after that Williamson, who had only meant to save weight and material, went around like Peter in the *Bab Ballads,* who blushed so hard you might have heard him miles away. He must have acted in the same way at Riverton, before he managed to say:

"You—you want to get down to rock, don't you?"

"Yes."

"Well, those niggers were so scared of the cave-in

that they refused to go into the pit unless I went with them."

That was different! That was the act of an officer, leading his men into danger. From that moment until the day of his death Goethals had Williamson as his lieutenant on every job of importance. Any misguided person who tried to come between Goethals and Sydney B. Williamson found himself between hammer and anvil. Together they whipped the quicksands of Colbert Shoals and built the Riverton Lock.

"The lock was not entirely completed before he was ordered to Washington for duty," said Mr. Williamson in describing the work of Captain Goethals in after years, "but all plans had been prepared, the force organized, and the construction problem solved so that the work was well under way before he left. Even as a young officer he displayed the organizing ability and the fairness to all employees for which he subsequently became justly famous in connection with larger undertakings."

Mr. Williamson also supplies the following personal recollections:

"While Captain Goethals rarely attended social functions, he made a large number of friends in Florence, Alabama, and the vicinity. Probably his best friend in Florence was a wounded Confederate

veteran, Captain John R. Price, who was so disabled that he walked with serious difficulty and in consequence drove about in a pony cart. It was not unusual to see the soldierly-looking Goethals and his friend Price driving about in a cart drawn by a diminutive pony which Goethals, with a little exertion, might have carried one end of, at least.

"He handled visiting Congressional Committees in those days with the same precision as he did on the Panama Canal. They followed his schedules practically on time. The only delay I recall was one insisted upon by Representative Berry from Kentucky, to gather mint from a bed near Lock No. 3 at Muscle Shoals Canal. This having been accomplished, the boat proceeded through the Canal, and all work subsequently inspected looked better to the Committee.

"He did not have much luck, however, in pushing Colonel H. M. Robert, the Division Engineer, over the job on schedule time. The Colonel was a delightful old soul, a great talker, and a 'pig for details'; everything had to be minutely explained, and if the explanation did not satisfy, more or less argument was necessary, or the point demonstrated, if practicable.

"Colonel Robert was more or less a father to the

younger officers of the Corps. Captain Goethals was very fond of him and delighted in telling about the Colonel's lecturing in his fatherly way a contemporary of Goethals on the subject of speaking disrespectfully of superior officers. There was another colonel who was a good bit of a martinet, and when Colonel Robert finished, the youngster replied:

" 'Why, Colonel, I never spoke disrespectfully of a superior in my life, not even of Colonel Blank—damn his old soul!' "

CHAPTER V

ASSISTANT TO CHIEF OF ENGINEERS AND SERVICE IN THE PORTO RICAN CAMPAIGN

THE work which Captain Goethals had performed on the Tennessee River had been executed under the supervision of General Thomas L. Casey, Chief of Engineers of the Army. That officer was so deeply impressed with the energy and ability that Goethals had displayed, especially in the construction of the Riverton lock, that, before the task was completed but not before its successful accomplishment was assured, he had him called to Washington for service as his assistant in the headquarters of the Corps. In this position it was the special duty of Goethals to review and report on specifications for engineering work, contracts, lake surveys and money accounts for the Engineer Department at large. This gave him valuable experience in engineering work on a large scale and was of the first value to him when he was placed in charge of the Panama task.

He remained in the position from October, 1894, until May, 1898, serving under three successive chiefs, General Thomas L. Casey, General W. P. Craighill, and General John M. Wilson. On his efficiency report for 1897, the Chief of Engineers wrote, "Daily contact with this officer has impressed me with the fact that he is a man of the highest character, an engineer of marked ability and excellent judgment. I believe him peculiarly fitted for any duty that could be intrusted to any officer of the Army, however high be his rank."

On the outbreak of the War with Spain, in April, 1898, two general officers of the army applied for the services of Goethals, Major-General John Rutter Brooke of the First Army Corps, and Brigadier-General William Ludlow of the Cuban Expedition. As the appointment to General Brooke's staff carried with it the rank of lieutenant-colonel, he accepted it.

On his withdrawal from the office of the Chief of Engineers, General Wilson, then its head, sent Goethals an unofficial letter, written in his own hand, which bears eloquent testimony to the esteem and affection in which his superior officers held him:

"OFFICE OF THE CHIEF OF ENGINEERS,

UNITED STATES ARMY,
WASHINGTON, D. C.,
May 25th, 1898.

"LT.-COL. GEO. W. GOETHALS,
"Capt., Corps of Engineers, U. S. A.
"MY DEAR COL. GOETHALS:

"Although the regulations of the Army prohibit me from stating in orders my deep appreciation of the earnest, faithful, efficient and thoroughly loyal assistance you have given me during the past sixteen months, there is neither law nor regulation which will prevent me from expressing my great personal regret that your promotion will deprive this office of your intelligent and energetic assistance and that I am to lose from my immediate official associates, one whom I have learned to admire and respect for his energy, skill and ability and who has won my warm personal regard by a modest display of all those attributes which make up the accomplished soldier, the ever courteous gentleman, the faithful friend.

"I congratulate the Corps upon your well-deserved promotion.

"God grant that you may return in safety to your loved ones, crowned with honors which you will

surely win, and that the remainder of your life may be filled with health, happiness and prosperity.

"Yours very sincerely,

JOHN M. WILSON,
Brig.-Genl. Ch. of Engrs.,
U. S. Army."

For nearly a month before this letter was written, Colonel Goethals had been busily engaged, as engineer officer on General Brooke's staff, in preparing Camp George H. Thomas, at Chickamauga Park, Georgia, for the reception of troops.

"One of the principal difficulties encountered," observed General Brooke in his report to the Secretary of War, "was the supply of water, which was overcome by the establishment of pumps and mains, through which was sent a large supply of water from the Chickamauga Creek, the analysis of which showed it was good water. A large number of wells were bored, supplying good water by that means; nevertheless, in this large assemblage of men, disease of various kinds soon took hold; this in spite of all the sanitary precautions taken to avoid it."

The "sanitary precautions" of 1898 were, from our point of view today, pitifully crude and hideously inadequate. Camp Thomas, like most of the other

cantonments, became a vile pest-hole, a much more dangerous place for an American soldier than any battlefield of the war. The Surgeon-General's annual report declared that 3,426 cases of typhoid fever had occurred at Camp Thomas. It placed the blame, however, not on the official water-supply through Colonel Goethals' pipe-lines and iron-cased wells, but on "numerous surface springs, the most of which should not be used, but from which the men have drunk freely." Colonel Woodhull, the inspecting surgeon, describes "sinks within thirty yards of the kitchens and very offensive," while swarms of flies and clouds of dust were carrying pollution freely through the slovenly policed camps of badly equipped and worse disciplined volunteer regiments huddled together on clay-bottomed flats and in swampy woods, during a rainy summer. Dr. Woodhull is significantly silent about screening, and anti-typhoid serum had not yet been dreamed of in 1898. Under the circumstances, an epidemic was inevitable. Certainly, nothing that lay within the authority of the chief engineer of the First Army Corps could have prevented it.

Compared with the drab efficiency of the World War, the War with Spain seems a cheerfully casual sort of family affair. A trained staff officer of 1918

would hardly have chatted quite so openly about overseas troop-movements, in a letter to his twelve-year-old boy, as Colonel Goethals did to his son, George, from Chickamauga, July 22, 1898:

"We are to go to Porto Rico and I leave tomorrow at 2.30 P.M. for Newport News, where we will be for a few days before going to our destination on board the *St. Louis*. . . . "

Accompanied by the other transports carrying Hains' Brigade (2nd Brigade, 1st Division, 1st Corps), they arrived at Ponce on July 31st. There General Brooke was ordered by General Miles to disembark his command at Arroyo, a little port near the southwest corner of Porto Rico. There was no wharf, only an open beach over which a heavy surf was breaking. The expedition was entirely unprovided with tugs or lighters, but there were five large flat-bottomed sugar-barges in the roadstead. Ordered by General Brooke to construct a wharf, Colonel Goethals directed the detachment under his command to take one of these barges, fill it with sand, and sink it as the foundation for a wharf. This they did very quickly, and under his direction they were seizing a second one with which to complete the structure when a naval lieutenant appeared to inform Colonel Goethals that those barges had been cap-

tured and were being held by the Navy as prizes of war. Moreover, he brought the orders of his commanding officer, the captain of the battleship under whose protection the landing was being made, that the Colonel was not to use those barges.

Colonel Goethals replied that he was acting under the orders of *his* commanding officer and would take none from anyone else, proceeding rapidly with operations with the second barge. The naval lieutenant reported to his captain and returned with word that unless the Colonel heeded his orders the battleship would open fire on him. The Colonel told him to fire away. The naval captain did not open fire, but appealed to General Brooke, who sent word to Goethals not to use the barges and to get lumber with which to finish the wharf. The Colonel replied that there was no lumber to be had, and finished the structure with the barges. He was threatened with court-martial proceedings, and was compelled to exist for several years under the acute displeasure of the naval captain—later admiral—who during that period refused to speak to him, but he was never brought before a court-martial.

Two transports, carrying all of General Brooke's cavalry, artillery, and wagon-trains, ran aground in

the badly-charted harbor of Ponce and were unable to reach Arroyo for some time, thus delaying the already slow process of debarkation. Two infantry regiments under General Hains pushed inland, drove back a small Spanish force, and occupied the town of Guayama on August 5th. Three days later, a reconnaissance found the enemy strongly entrenched in a position commanding the road from Guayama to Cayey, where it winds upward to the crest of a mountain pass, near the coffee-plantation of Pablo Vasquez.

Having finally got his cavalry, field-guns and escort wagons ashore, General Brooke left Guayama early in the morning of August 13th, to make a frontal attack on the Spaniards at Pablo Vasquez, while General Hains was leading the Fourth Ohio in single file up a mountain trail that ran to the crest of the pass and the defenders' rear. General Brooke, a veteran of the Civil War, marched afoot with his staff at the head of the main column to the point on the highroad where the reconnoitering party of August 8th had been fired upon. There the leading field-battery (B of Pittsburgh) was ordered to unlimber and open fire.

Colonel Goethals, standing with the other staff

officers at the edge of the curving road and looking through his field-glasses up the pass, was watching the blue-shirted American skirmishers advancing toward the white-clad figures in and about the Spanish trenches. Behind him, he could hear the rumble of wheels, the tramp and jingle of gun-teams, subdued commands, the closing of a breech-block—and then a horse coming up at a tired gallop and a stranger's voice exclaiming, "Important message, sir!"

Lowering his glasses, Colonel Goethals looked to the rear. He saw a mounted officer of the Signal Corps handing a folded paper to General Brooke, who read it in silence, then passed the message to the nearest member of his staff. It ran:

"PORT PONCE, August 13, 1898.

"MAJOR-GENERAL BROOKE,

Arroyo

"By direction of the President, all military operations against the enemy are suspended. Negotiations are nearing completion, a protocol having just been signed by representatives of the two countries. All commanders will be governed accordingly.

"By command of MAJOR-GENERAL MILES,

GILMORE,

Brigadier-General."

General Brooke Receives the Armistice Dispatch

Swearing bitterly, the Pennsylvania gunners limbered up, General Hains was recalled, and the whole command fell back to Guayama, where T. Dart Walker, special artist for *Harper's Weekly*, made his double-page drawing of "The Dramatic Ending of the War in Porto Rico." Colonel Goethals wrote to his son George: "I had to pose for the group about General Brooke and I am just to his right as you look at it."

That soldierly figure turning away with obvious disappointment from what was to have been a battlefield is not only an excellent portrait of Goethals, but a symbol of his whole military career. An ardent soldier, he was never to know active service. His victories were not to be those of war.

Two months later, on the morning of October 18, 1898, Colonel Goethals stood by the naked flagstaff on the roof of the Intendencia, looking down on the main plaza of San Juan, the capital city of Porto Rico. He had ridden northward from Guayama with General Brooke's staff and escort, and had been assisting his commanding officer in his duties as chairman of the Evacuation Board. That body had now completed its work. That morning, from cuartel and barrack the Spanish bugles sounded their final call. Sixteen hundred Spanish officers and men

marched forth to their embarkation camp outside the walls. At the first stroke of noon from the clocks of the cathedral and the City Hall, the United States troops drawn up in the streets and plazas were called to attention, while Colonel Goethals, and the other officers assigned to this honorable duty at the forts and public buildings, grasped the halliards. At the twelfth stroke they raised the Stars and Stripes over Porto Rico.

The flag which Colonel Goethals raised on this occasion was afterward presented to him by General Brooke and is now in the possession of his family.

CHAPTER VI

WEST POINT, COAST FORTIFICATIONS, AND THE GENERAL STAFF

GOETHALS was honorably discharged as Lieutenant-Colonel of Volunteers on December 31, 1898, retaining his regular army rank as Captain of Engineers. He had already been appointed, on December 15th, Instructor in Practical Military Engineering at West Point. There he found his academic duties greatly curtailed by the premature graduation of the class of 1899 in February, to meet the urgent need of officers for the army, again in a state of sudden wartime expansion because of the outbreak of the insurrection in the Philippines. Consequently, instruction in what the cadets call "P.M.E." during April, 1899, was confined to the class of 1900 and limited to military signaling and the construction of a pontoon bridge. In July, the classes of 1900 and 1902 practiced the ancient and formal art of intrenchment, very much as laid down by Vauban in the days of Louis XIV. Some of the

devices listed by Captain Goethals in his annual report: "fascines, hurdles, gabions (brush and iron), fascine and gabion revetments," sound quaintly archaic. But "gun-pits, sand-bag revetment, simple trench and its enlargement . . . (full scale)" decidedly had their future.

There is a story that has been circulating in the Army for no one knows how long, about an instructor of engineering at West Point who asked his class how the commander of a new post should go about erecting the flag-pole on the parade-ground. Elaborate written answers were prepared, but the instructor rejected them all. The post commander, he declared, should simply say to the sergeant commanding the detail, "Erect that flag-pole!"

Some anonymous magazine-writer succeeded in selling this story, a few years ago, by making Goethals the officer who said this. Goethals flatly and repeatedly denied ever having said anything of the kind. His cadets in P.M.E. did not solve problems on paper, but did actual work in siegecraft and bridging. And who ever erected a flag-pole in a trench or on a pontoon?

A genuine anecdote of Goethals' method of teaching and enforcing discipline is supplied by General R. E. Wood, of the class of 1900:

"General Goethals, then Captain Goethals, was Instructor in Practical Military Engineering during my first-class year at West Point from June, 1899, to 1900.

"We all knew him as stern but just. Our cadet nickname for him was Turtlehead.

"My recollections are pretty hazy except for one instance. During the summer of 1899, which was my first-class camp, we had instruction in P.M.E. from Captain Goethals. Among other things, we had to construct a pontoon bridge down on the banks of the Hudson. I remember on one very hot day in July, after the class had assembled and Captain Goethals had assigned us our duties, several of us, boylike, decided it was too hot to build bridges; so four or five of us got down in the shade behind one of the lumber piles and were resting luxuriously when we looked up to see our instructor. We all jumped up. He looked at us and smiled a very sardonic smile and said: 'You young gentlemen are now assigned to carrying the balk [the balk being the heavy timbers supporting the bridge] and you will also carry the balk at double time.' So for the next three-quarters of an hour we were carrying those heavy timbers at double time until our tongues hung out. I do not

think that any of the class ever loafed again while Captain Goethals was instructor."

That "very sardonic smile" lights up a rather grim sentence in Goethals' annual report to the Superintendent of the Academy, "There have been six desertions since I assumed command of the company, and in each case the company has been the gainer."

To prepare the bridge and siege material and help instruct the cadets in P.M.E. was the duty of E Company, 2nd Battalion of Engineers, now known as "The United States Military Academy Detachment of Engineers." This organization has an unbroken history from its original formation in 1861, with an honorable record of service in three wars. When George Washington Goethals became its captain, the company had just returned from the Santiago campaign, and there were veterans present whose memories extended back to the Civil War. When the General's son, George R. Goethals, took command of "The Detachment" in 1917, he found four of his father's old non-commissioned officers still on its rolls; in 1929 there were several of his own sergeants still serving with the organization, though all of his father's men had long since reached the age of retirement. Such continuity of service in one company is all too rare in the United States Army.

E Company had a variegated lot of duties, besides helping instruct in P.M.E., to perform in 1899. It furnished a daily guard detail of two non-commissioned officers and eleven privates, kept its overcrowded barracks in good order and repair, cultivated its garden, supplied teachers for the school for enlisted men's children, remodeled the siege-battery and looked after all the batteries on the reservation, built new rifle ranges and supplied markers for cadet rifle practice. On Memorial Day it paraded up Fifth Avenue; and four months later from Grant's Tomb to Washington Square, in the parade in honor of Admiral Dewey.

At the same time, Captain Goethals was superintending the construction of the filter-beds for the new water-supply, and building them so well that thereafter the cadets ceased to find the customary thick overnight deposit of sediment at the bottom of their water-pails. In 1900, he was in charge of extensive repairs that practically amounted to the remodeling and rebuilding of the Academy Library.

Architecturally and otherwise, both the Academy and the Post were still the West Point that Goethals had known in the 'seventies and 'eighties. Cadets wore the same little gray forage cap of Civil War pattern; officers and enlisted men, the traditional

army blue. Gas was burned in the gray stone barracks and red brick quarters. Captain Goethals and his family occupied Quarters 42, the eastern half of a double, three-story house, just east of the Catholic chapel. The two boys, George and Tom, attended the little one-class-room school for officers' children, and spent a good deal of their play-time making friends with the enlisted men at E Company's barracks.

Ordinarily, the Instructor in Practical Military Engineering served at West Point for four years before he was transferred to another post. But the position might then be filled only by a captain, since it carried with it command of "The Detachment." On February 7, 1900, Goethals was commissioned major. As a field officer, he could not remain in command of a company. Instead, he was placed in charge of the U. S. Engineer Department District at Newport, which then comprised all river and harbor work from Block Island to Nantucket. His principal work during this period was the completion of the seacoast defenses of Fort Wetherell and Fort Greble, R. I., and Fort Rodman, Massachusetts. He learned something more about railroading by building construction lines and operating trains to haul material for the fortifications in Rhode Island.

National interest in coast defenses had been

greatly stimulated by the Spanish War. Many of the permanent works recommended by the Endicott Board in the 'eighties were now being built and armed. In the summer of 1902, joint army and navy maneuvers were held in Narragansett Bay and at the eastern entrance to Long Island Sound, a fleet of battleships attacking the forts, while a flotilla of torpedo craft, including the Holland submarine, aided the defense. An unusually large number of searchlights had to be assembled and installed at very short notice by the army engineers under Major Goethals, who was especially commended for the entirely successful manner in which he accomplished this task.

Another and more important result of the War with Spain was the entire reorganization of the system of command and control of the United States Army. Hitherto, there had been a so-called "General Commanding the Army," with authority over troops of the line in peace-time, but no control over the various administrative staffs and supply departments, whose heads reported directly to the Secretary of War. There was no central authority to coördinate these different agencies of warfare and make them work together as one machine. When it tried to move and fight, the army floundered about like a

big prehistoric lizard with plenty of nerve centers but practically no brain.

Moreover, nobody in authority had any definite idea of what to do when we found ourselves at war with Spain. The President could order troops to Tampa, but the capacity of the railroads to haul them there and keep them supplied, the ships available to transport them overseas, or the landing facilities at the enemy ports—Arroyo, for instance—these and a thousand other important facts could only be guessed at blindly. Obviously, there was need not only of a central command, but also of an intelligence service for keeping it well informed.

The General Staff Act, approved February 14, 1903, abolished the separate office of General Commanding the Army and provided for a military Chief of Staff to the President, who, acting under the direction of the President and the Secretary of War, should have supervision of all troops of the line and all special staff and supply departments alike. Since these duties were obviously too complicated for any one human brain, the same act created for the assistance of the Chief of Staff a corps of forty-four officers who were relieved of all other duties. The function of this new corps was described by the statute in the following words:

"Sec. 2. That the duties of the General Staff Corps shall be to prepare plans for the national defense and for the mobilization of the military forces in time of war; to investigate and report upon all questions affecting the efficiency of the Army and its state of preparation for military operations; to render professional aid and assistance to the Secretary of War and to general officers and other superior commanders, and to act as their agents in informing and coördinating the action of all the different officers who are subject, under the terms of this act, to the supervision of the Chief of Staff; and to perform such other military duties not otherwise assigned by law as may be from time to time prescribed by the President."

General Young was appointed the first Chief of Staff, and two general officers to assist him were selected by President Roosevelt. The other members of the Staff Corps were chosen by a board consisting of Generals Young, Chaffee, John C. Bates, Carter, Bliss, and Randolph, who were required upon oath to recommend forty-two officers for detail upon their merits as exhibited by their military records.

Upon the report of this board, its recommendations were approved without change, and the officers selected were ordered to Washington to report to

General Young. Major Goethals was among those chosen, together with Major David DuBose Gaillard of the Corps of Engineers, afterward in charge of the Central Division of the Panama Canal, Captain Peyton C. March, Artillery Corps, afterward Chief of Staff during the World War, Colonel Enoch H. Crowder, afterward Judge Advocate General, and Captain John J. Pershing, 15th Cavalry. Of that group of forty-two officers on the first provisional General Staff, not less than twenty-five were to become generals.

On August 15, 1903, when the provisional organization ceased to exist, Goethals became a member of the permanent General Staff. He was assigned to the 3rd Division of the General Staff, and to the permanent personnel of the War College, on January 6, 1904. When the National Coast Defense Board, usually known as the Taft Fortification Board, was created in 1905 to supplement the work of the Endicott Board of twenty years before, Major Goethals was appointed its secretary. The duties of this position threw him into intimate and prolonged contact with the Secretary of War, on their numerous tours of inspection, in the course of which they visited practically all the fortifications of the Atlantic, Gulf, and Pacific Coasts.

Usually, these trips were made on a warship. According to family tradition, the Secretary and the major were somewhat amused by the solemn naval ritual, when the officer of the deck solemnly reports: "Sir, it is nine o'clock," and the captain officially approves the action of the chronometers by responding, "Make it so." One night when they were in the captain's quarters aboard a battleship, Mr. Taft yawned and observed: "It is bed-time, er—General," and Major Goethals responded prayerfully, "Make it so!"

The more he saw of Major Goethals and his work, the more highly did Mr. Taft think of the engineer officer's character and attainments. This impression was to leave its mark on the history and geography of the world, for by this time the most important work of the War Department was the building of the Panama Canal.

Looking back over his own career and trying to console a young captain of infantry for being kept out of the trenches in 1918, Goethals philosophized:

"Life is rather peculiar at best, and what seems to be to our interests frequently turns out the reverse; and, as we look back, that which we have been obliged to do has been to our advantage rather than to our detriment. I fought my detail duty at West Point,

yet when I finished and got into active work I appreciated that I could handle this much more effectively, because of my tour at West Point, than otherwise would have been possible. I fought against my assignment to the General Staff, cussed my luck all the time I was on it, regretting the fleshpots of Newport or some other good engineering station; and yet but for that detail I would never have gone to Panama."

CHAPTER VII

PANAMA FROM GOETHE TO GOETHALS

1827. Feb. 21st.

Dined with Goethe. He spoke much, and with admiration, of Alexander Von Humboldt, whose work on Cuba and Columbia he had begun to read, and whose views as to the project of making a passage through the Isthmus of Panama appeared to have a particular interest for him.

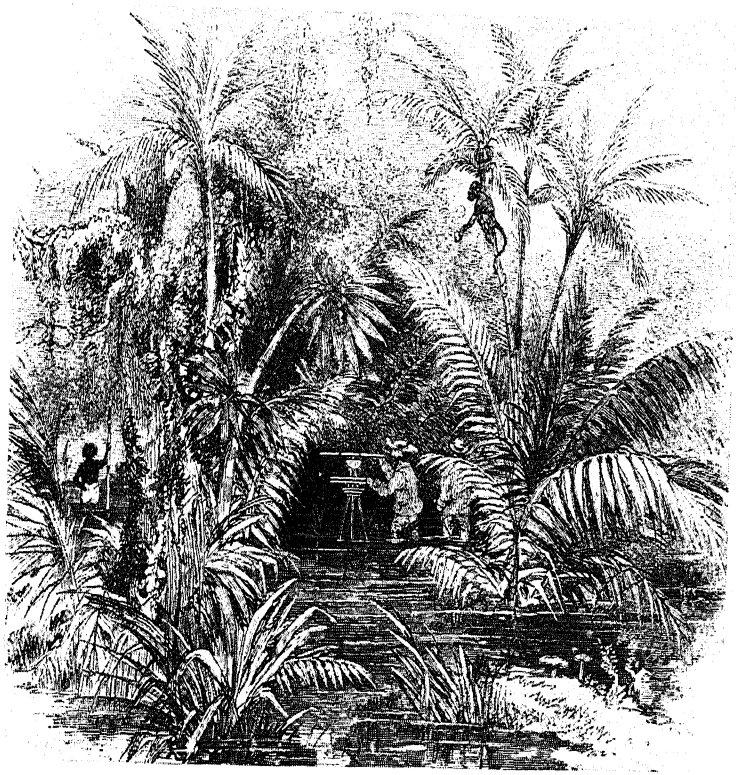
"Humboldt," says Goethe, "has, with a great knowledge of his subject, given other points where, by making use of some streams which flow into the Gulf of Mexico, the end may be attained perhaps better than at Panama. All this is reserved for the future, and for an enterprising spirit. So much, however, is certain, that if they succeed in cutting such a canal that ships of any burden and size can be navigated through it from the Mexican Gulf to the Pacific Ocean, innumerable benefits would result to the whole human race, civilized and uncivilized.

"But I should wonder if the United States were to let an opportunity escape of getting such work into their own hands. It may be foreseen that this young state with its decided predilection to the West will, in thirty or

forty years, have occupied and peopled the large tract of land beyond the Rocky Mountains. It may, furthermore, be foreseen that along the whole coast of the Pacific Ocean, where nature has already formed the most capacious and secure harbors, important commercial towns will gradually arise, for the furtherance of a great intercourse between China and the East Indies and the United States. In such a case, it would not only be desirable, but almost necessary, that a more rapid communication should be maintained between the eastern and western shores of North America, both by merchant-ships and men-of-war, than has hitherto been possible with the tedious, disagreeable, and expensive voyage round Cape Horn. I therefore repeat, that it is absolutely indispensable for the United States to effect a passage from the Mexican Gulf to the Pacific Ocean; and I am certain that they will do it.

"Would that I might live to see it!—but I shall not. I should like to see another thing—a junction of the Danube and the Rhine. But this undertaking is so gigantic that I have doubts of its completion, particularly when I consider our German resources. And thirdly, and lastly, I should wish to see England in possession of a canal through the Isthmus of Suez. Would I could live to see these three great works! It would be well worth the trouble to last some fifty years more for the very purpose."

—Extract from *Goethe's Conversations with Eckerman.*



SURVEYING UNDER DIFFICULTIES IN THE BLACK SWAMP

Just nineteen years after this remarkable prophecy the United States signed a treaty with Great Britain that ended the long dispute between those countries about the boundary west of the Rocky Mountains and gave us possession of Oregon. In that same eventful year of 1846 we began the war with Mexico and the conquest of California, launched the first clipper-ship, the *Rainbow*, at New York, and made a treaty with the Republic of New Granada that granted the United States Government the right of free and open transit across the Isthmus of Panama. In return, the United States guaranteed the neutrality of the Isthmus and the sovereignty of New Granada over that territory.

Though concluded in December, 1846, this treaty was not ratified until June, 1848, four months after the conclusion of the Mexican War and the discovery of gold in California. Thousands of Americans, avoiding the dangers of the overland trail and the "tedious, disagreeable, and expensive voyage round Cape Horn," took ship for the Isthmus. They poured into the torpid little negroid village at the mouth of the Chagres River, where the carrion buzzards dozed on the peaks of the thatch roofs huddled under the crumbling walls of Fort San Lorenzo, a swelling torrent of mad foreigners in new red shirts, outbid-

ding one another's frenzied offers for squatting-room in an upriver boat and a mule on Gorgona Trail. Three days of slapping mosquitoes and watching the naked black boatmen pole the dugout foot by foot up the Yellow Chagres; three flea-bitten nights on rawhides stretched on the mud floors of densely-populated native huts, meals of lizard meat and tiny eggs that cost four for a dollar; twelve hours' back-breaking scramble over the worn-out road where the mules fumbled for footing on rolling cobbles at the bottom of mud-holes that mired them to the fore shoulder—until at last the tunneled jungle trail opened out on rolling savannahs, and against the rich blue of the Pacific rose the bastioned walls, red roofs, and twin cathedral-towers of Panama.

Wearily waiting for ships to take them to San Francisco, where ships were rotting three deep at their moorings, the Yankees scratched their names on the ramparts of the seventeenth-century sea wall, and started two newspapers, the *Star* and the *Herald,* which after a brief, unprofitable rivalry combined in the present *Panama Star and Herald.* Soon its columns began to note the regular arrival and departure of paddle-wheel steamers plying between New York and Chagres, and between Panama City and San Francisco. Congress had authorized a line

of American steam-packets to be run down either coast to the Isthmus, and appropriated money to pay them for carrying the United States mail. William H. Aspinwall, who had founded the Pacific Mail, and George Law, who had the contract on the Atlantic, combined with a third New York capitalist, Henry Chauncey, to build a railroad across the Isthmus. Chauncey and John L. Stephens, a veteran explorer who had done pioneer archæological work among the Maya ruins of Yucatan, had already obtained from the Republic of New Granada the exclusive right to build such a road; and Stephens had explored the route with a trained engineer, Mr. J. L. Baldwin, and reported that it could be built for a million dollars.

Around the curve of the coast-line from the port of Chagres, busier than ever in 1850, a forlorn little brig and a condemned steamer, the *Telegraph*, rolled and pitched at their anchorage in the open roadstead of Navy, or Limon, Bay. Ashore, a narrow, stump-dotted clearing on Manzanillo Island made *the only* breach in the otherwise solid wall of mangrove swamp and towering jungle. At sundown, two bearded white men at the head of some fifty blacks and mixed-breeds, all mired to the waist, would trudge wearily out of the palm-grove back of the clearing, shove off

the boats drawn up on the beach, and row out to their miserable quarters aboard the *Telegraph.* Even seasickness was preferable to the sand-fleas and mosquitoes ashore. Blood-sucking insects filled the air so that no man could work except in a veil and gloves. The swamps were a perfect breeding-place for the *anopheles* mosquitoes, which kept sucking the malaria germ from one man's veins to inject it into another's. At one period there was only one American engineer fit for duty at a time, Totten and Baldwin alternately taking charge of the work and collapsing under the recurrent attack of "Chagres fever." Then Chauncey and Stephens would bring in another ship-load of recruits and supplies for the battle with the jungle.

Foot by foot those iron pioneers drove their trestle across the tidal frith to the coastal swamps, touched solid ground at Monkey Hill, then plunged into the deeper, broader swamps beyond, that swallowed up whole furlongs of track overnight, and devoured the company's capital so fast that building those first eight miles from Manzanillo Island to the bank of the Chagres at Gatun consumed the last cent of the million dollars subscribed for constructing the entire Panama Railroad—with forty-two miles left to go.

Then into Limon Bay steamed the liners *Georgia*

and *Philadelphia,* seeking refuge from the storm that was keeping them from entering the mouth of the Chagres. Their passengers saw the railroad ashore and insisted on riding the flat-cars to Gatun. At the news of a thousand cash fares for one day's passenger traffic on the Panama Railroad, its stock and credit rose high. A busy, profitable trade route had been tapped and deflected; Chagres withered and died, while Manzanillo Island was laid out in town lots and boomed as the City of Aspinwall. But the native authorities rechristened it "Colon," as the Spaniards call Columbus, and because they controlled the post-office and finally refused to deliver any more mail addressed to "Aspinwall," the Spanish name prevailed.

Now the steadily retreating river trade began at the steadily advancing rail-head. For twenty-two miles up the Chagres Valley the railroad partly paid its own way. Seven million dollars' worth of additional stock was authorized and sold, the river was bridged at Barbacoas, and the road pushed to the summit of the lowest pass across the continental divide, at Culebra. The remaining eleven miles of pine rails edged with strap-iron were shipped in sailing-vessels round Cape Horn, and laid from Panama City to Culebra. Here, "on the twenty-seventh day

of January, 1855, at midnight, in darkness and rain, the last rail was laid, and on the following day a locomotive passed from ocean to ocean." [1]

There is a popular fable, that will be told and believed as long as the Chagres runs to the sea, that the building of the Panama Railroad cost a life for every tie. A British naval officer who visited the Isthmus as early as 1853, when the road extended only to the unfinished Barbacoas Bridge, found this story already in circulation and somewhat hard to believe, after he had estimated the number of "sleepers or 'cross-ties' as our 'Transatlantic cousins' call them."

"It has become a 'by-word' here, but I trust there is much exaggeration in the mere notion that the deaths might be calculated by the 'sleepers' (sad coincidence of words!); *one death to each log of timber* (a yard apart) along the entire line!

"But let us hope that such a fearful 'bill of mortality' as would comprehend *forty-four thousand deaths* is a mere hideous 'fiction of the brain'; and that not *half* that number have perished." [2]

As a matter of fact and record, there were about

[1] Otis, Dr. F. N., *Handbook of the Panama Railroad,* New York, 1861.

[2] *United Service Magazine,* 1854, part i, p. 39. The writer, who signs himself simply "A. L.," was evidently an officer of the Royal Navy, from his references to himself in the context.

150,000 ties in the fifty miles of single track of the original Panama Railroad; the total number of men employed from the beginning of the work to the end was about 6,000, and the number of deaths 835. Doubtless many others sickened on the Isthmus and died soon after they left it, but even so, the health of the force was remarkably good for men toiling in a tropical swamp at a time when no doctor knew how to prevent malaria—although Trautwine, the engineer, came curiously close to the root of the matter in his "Private Notes":

"TROPICAL PRECAUTIONS

"A veil over the face is a partial protection from miasmatic vapors.

"*Dry* rooms are important. Sheet-iron stoves. When camping out a large brushwood fire all night.

"Keep closed such doors and windows as open to winds blowing across marshes; very important, especially to the sick. But if they must be open, have screens of gauze or *copper* wire, which is better than iron, if near salt water, as it does not rust.

"Mosquito nets are good, not only against insects but miasma. Bolting-cloth is strongest and best."

There were fewer cases of fever among people who slept behind screens and wore veils, so it was a per-

fectly logical deduction in those days that the screens were straining the poisonous "miasma" out of the dreaded night air. It is noteworthy that neither Dr. Otis nor any other contemporary writer makes any mention of yellow fever during the building of the Panama Railroad.

When the road was opened in January, 1855, it was far from being completed. Ravines were crossed on crazy trestles of green timber, the track was unballasted, and there was a great shortage of both engines and cars. So the superintendent recommended that, until they were better able to handle traffic, most of it be kept away by charging the very high rates of fifty cents a mile for passengers, five cents a pound for baggage, and fifty cents a cubic foot for freight.

"To his surprise, these provisional rates were adopted; and what is more, they remained in force for more than twenty years. It was found just as easy to get large rates as small; and thus, without looking very much to the future, this goose soon began to lay golden eggs with astonishing extravagance. The road was put in good order, with track foremen established in neat cottages four or five miles apart, along the whole line. New engines and cars

were put on, commodious terminal wharves and other buildings provided, and all things were in excellent shape." [1]

Trestles were made into solid embankments and wooden bridges and rails replaced with wrought iron, the great girder bridge at Barbacoas being the wonder of the time. Instead of pine, too quickly eaten up by termites, new ties were laid of lignum-vitæ, a tropical wood so hard that holes had to be bored before the iron spikes could be driven in without crumpling up. These ties, laid in 1855, were still unrotted when taken up on account of the relocation of the line in 1910.

Instead of the estimated million dollars, the total cost of building this fifty-mile railroad was eight millions. But even before the first through track was laid, it had earned two million dollars' worth of fares, and during the first ten years of its existence it took in $11,339,662.78. This was the golden age of the Panama Railroad, when it enjoyed the monopoly of the Atlantic trade, not only of California, but of the entire west coast of the three Americas. An iron treasure-car, bullet-proof and garrisoned by an armed guard, conveyed the shipments of California gold. Panama Railroad stock earned dividends of 24

[1] *Handbook of the Panama Railroad.*

per cent a year, and was considered one of the safest investments in Wall Street.

Then in 1869 came the opening of the Union Pacific and the loss of the California trade. But far more important than this was the traffic with the west coast of South and Central America, carried almost entirely in the ships of a British corporation, the Pacific Steam Navigation Company. The incredible stupidity of the Panama Railroad's directors forced this company to abandon its shops and dockyards on the island of Taboga, in the Bay of Panama, and send its ships direct to England through the Straits of Magellan. Too late they realized that most of the trade had gone with them.

By the end of the 'seventies, the Panama Railroad's track had become the traditional "two streaks of rust," its once-prized stock the football of Wall Street speculators. Then from overseas appeared a new customer: the Société Civile Internationale du Canal Interocéanique de Darien, usually referred to in American histories of Panama as the French Canal Company.

This corporation sent Lieutenant Lucien Napoleon Bonaparte Wyse of the French Navy to make a survey of the Isthmus in 1877, and although he never went more than two-thirds of the distance from

Panama to Colon, he brought back complete plans, with the cost of construction figured out to within 10 per cent, for a sea-level canal between the two cities. After a little more work on the Isthmus, next year, Wyse obtained a concession from the government at Bogotá, granting the exclusive right to build an interoceanic canal, not only at Panama, but anywhere else through the territory of the United States of Colombia, as New Granada was then called. It seems incredible that the French people should have taken Wyse seriously and invested hundreds of millions of dollars in an enterprise of which they knew so little. What blinded them was the name of the man who now came forward as the head of that enterprise—Ferdinand de Lesseps.

He was the "great Frenchman," the most popular and honored man in France, because of the glory he had won her by the construction of the Suez Canal. Sent on a diplomatic mission to Egypt, Lesseps, although not a trained engineer, had recognized the ease with which a ship canal could be dug through the hundred miles of level sand and shallow lakes that separated the Mediterranean from the Red Sea. Such a canal had existed centuries before Christ, when the Isthmus of Suez was much narrower than

it is today, between the Red Sea and the Pelusiac branch of the Nile.

A company was formed in France; the Khedive of Egypt took a majority of the stock, and forced thousands of his subjects to work as laborers for virtually nothing, even as their ancestors had toiled for Pharaoh. The Suez Canal was completed in ten years, at a cost of a million dollars a mile, and ever since its opening in 1869 it has paid its owners handsome profits. But the bankrupt successor of the Khedive sold his stock to the British government, thanks to the astuteness of Benjamin Disraeli, in 1875, thereby giving England what Goethe had wished to see—"possession of a canal through the Isthmus of Suez."

Lesseps first appeared in connection with Panama as chairman of the International Canal Congress held in Paris in May, 1879. The experienced naval officers and trained engineers who were invited from many different countries found themselves in a helpless minority. They were there simply to lend a show of authority to Lesseps' decision, already made, to build a sea-level canal across the Isthmus of Panama according to the plans of Lieutenant Wyse. The chairman allowed no discussion of the advantages either of a lock canal at Panama or of any kind of

canal at Nicaragua, but forced the adoption of the type and route he favored, by the vote of a small majority of French admirers, very few of whom were practical engineers. Then, adjourning his dummy congress, Lesseps came forward as the head of the French Canal Company, which had already paid Wyse $2,000,000 for his surveys and concessions. Finally, after everything had been decided on, Lesseps went to the Isthmus with an imposing Technical Commission of distinguished engineers.

He went there at the height of the dry season, when the rains had ceased and the country looked its prettiest. After one trip across the Panama Railroad, many speeches, and no end of feasting and drinking of healths, he hurried away to the United States, where he spent a great deal more time trying to induce the Americans to invest money in his enterprise, but without much success. Lesseps visited the Isthmus again on another joy-ride in 1886. Except for these two short visits, which together covered barely two months, Lesseps never set foot in Panama, but tried to dig the canal from his office in Paris. He was more than seventy years old—he was born in 1805—and although he knew very little about technical engineering, his success at Suez and the praise of flatterers made him believe that he was the greatest

engineer in the world. As he had dominated the congress, so he ruled the Canal Company, absolutely and blindly. Ignoring the great differences between the level, rainless sands of one isthmus and the rocky hills and flooded jungles of the other, Lesseps declared that "the Panama Canal will be more easily begun, finished, and maintained than the Suez Canal."

The proposed canal was to be a ditch dug down to twenty-seven and a half feet below sea-level, seventy-two feet wide at the bottom and ninety at the water-line. In general, it was to follow the line of the Panama Railroad from ocean to ocean. To keep the canal from being flooded by the Chagres, a great dam was to be built across the river at Gamboa. Because of the difference between the tides of the two oceans, a large tidal basin was to be dug out of the swamps on the Pacific side, where the rise and fall is ten times that on the Atlantic.

The Paris congress thought that such a canal *might* be built for $214,000,000. The Technical Commission, after a few merry weeks on the Isthmus, said that it *could* be done for $168,000,000. Lesseps, on his own responsibility, reduced these figures to $120,000,000 and declared that the Canal would be open in six years, and that enough ships would pass

through in the first year after that to pay $18,000,000 worth of tolls. Allured by these figures and trusting in the word of the "great Frenchman," hundreds of thousands of his countrymen invested their savings in the worthless stock of the Canal Company. Thick as the carrion buzzards swooping down on the garbage-strewn streets of Panama City flocked the swindlers and speculators who used the deluded old man's honored name as a bait for other people's money. Lesseps himself was honest, but so blinded by the memory of his past success that he could see nothing in Panama but another Suez.

Thousands of laborers and millions of dollars' worth of machinery were sent to the Isthmus before the slightest preparation had been made to receive them. The Panama Railroad refused to carry these men and materials except as ordinary passengers and freight at its own high rates. This extortion soon forced the French Canal Company to buy the railroad, paying for it, including termini, $25,000,000, or more than three times what it cost to build it. The organization and management of the road, however, still remained American.

This lack of foresight was the first great cause of the French failure. The second was disease. No one noticed the mosquito larvæ forming in the four lit-

tle pans of water that kept ants and other insects from swarming up the legs of each cot in the long wards of the two splendid hospitals built by the French, one on terraces laid out on the slope of Ancon Hill, overlooking Panama City, the other on piles over the water of Limon Bay at Colon. Every evening the good, pious Sisters of Charity who acted as nurses would close all the doors and windows tight to keep out the terrible night air, and then leave their patients to spend the night without ventilation or attendance. Too often there was more than one corpse to carry out in the morning.

No proper attention was paid to feeding the force; good food was scarce and bad liquor plentiful. "Vice flourished. Gambling of every kind and every other form of wickedness were common day and night. The blush of shame became virtually unknown. That violence was not more frequent will forever remain a wonder; but strange to say, in the midst of this carnival of depravity, life and property were comparatively safe." [1]

Neither life nor property was particularly safe, however, in Colon in '85. The third great reason for the French failure was graft; their company was robbed by the local authorities almost as enthusias-

[1] Robinson, Tracy, *Fifty Years in Panama.*

tically as by its own employees and the politicians in Paris. The politicians in Bogotá had a cynical motto —"Panama is the milch-cow of Colombia." As Panama was never quite strong enough to break away, nor Colombia strong enough to keep peace and order on the Isthmus, revolutions were chronic. Pedro Prestán and his black-and-tan followers burned Colon and were only prevented from burning the French suburb of Cristobal, with its great quantity of canal stores, by the arrival of three quaint old wooden United States corvettes, who landed five hundred dangerous-looking seamen and marines, to maintain the peace and neutrality of the transit, under the treaty of 1846. M. Bunau-Varilla, one of the French engineers, observed this affair with close interest.

All things considered, the wonder is not that the French failed to dig the Canal, but that they dug as much as they did. There was usually a new chief engineer every six months, and the work was split up among six large contractors and many little ones. Though the engineers who directed the work were French, the two contractors who did most of the digging were not. It was a Dutch firm (Artigue, Sonderegger & Co.), that took a surprisingly large quantity of dirt out of the Culebra Cut with clumsy excavators that could only work in soft ground, and

little Belgian locomotives and cars that looked as if they came out of a toy-shop. The dredges and other floating equipment were much more efficient and many of them were afterward repaired and used by the Americans. Most of these dredges were built in Scotland. But it was a Yankee firm (The American Dredging and Contracting Co.) that dredged the opening of the French canal to beyond Gatun. This company was the only contractor that made an honest profit out of the enterprise, and its big home-made wooden dredges had cut fourteen miles inland when the smash came in 1889.

Instead of the $120,000,000 originally asked by Lesseps, he had received and spent over $260,000,000. Instead of completing the Canal in six years, his company had dug less than a quarter of it in nine. Not a stone had been laid on the proposed great dam at Gamboa. Nothing had been done on the tidal basin except to discover that a few feet beneath what the Technical Commission had supposed to be an easily dredged swamp lay a solid ledge of hard rock. Year after year, Lesseps had kept explaining and putting off the opening of the Canal, and asking for more money, until more had been spent than any possible traffic through the Canal could pay a profit on. Instead of finding Panama an easier task than

Suez, the French had already dug 80,000,000 cubic yards, several million more than they did at Suez, and spent more than twice as much money. It was plain that the end had come.

A receiver was appointed for the French Canal Company, and a searching investigation made of its affairs. Criminal charges were brought against Ferdinand de Lesseps, who was convicted and sentenced to five years' imprisonment. But the sentence was never enforced against the old and broken-hearted man, and in a few months he died. Thousands of poor people were ruined. As for the real culprits, several committed suicide and others were fined and imprisoned. Among those found guilty were so many Senators, Deputies, and other members of the French Government that for a short time there seemed danger of a revolution and the overturning of the Republic.

As most of the assets in the hands of the receiver consisted of the equipment and the work already done on the Isthmus, the French Government permitted the formation of the New Panama Canal Company out of the wreckage of the old one. This company took over all the machinery and buildings on the Isthmus and in 1894 secured a concession from Colombia to finish the Canal in ten years. But

the new company had so little money that it could keep only a few hundred men and two or three excavators busy in the Cut. It was becoming plainer every lean year that the Canal could never be finished by 1904 or even by 1910, as later conceded, and that the company's only hope was to find a purchaser. And everybody knew that the only possible purchaser was Uncle Sam.

The enforced dash of the battleship *Oregon* around South America in the War with Spain woke up the United States to its need of a quicker naval route between the two coasts. Congress authorized the purchase of the rights and property of the New French Canal Company for $40,000,000, an offer which that company was only too glad to accept in 1903. We then offered Colombia $10,000,000 for its permission to the Canal Company to make the sale, and for a new concession to the United States, allowing us to build and maintain the Canal, and granting the United States full sovereignty over a strip of land six miles wide across the Isthmus.

The government of Colombia consisted just then of a gentleman named Marroquin, who had been elected Vice-President but had kidnapped the President with a troop of cavalry and shut him up in an

unsanitary dungeon where he soon died. Marroquin summoned the only congress he had ever had to consider the American offer. The Colombian congress considered the price too low, and resented the idea of surrendering national sovereignty over the proposed Canal Zone. Accordingly, they rejected the American offer, disregarding the warning of a delegate from the Isthmus, Señor Obaldia, that Panama would revolt. Marroquin's response was to make Obaldia Governor of Panama, instead of the usual Bogotá carpet-bagger. Perhaps the Dictator had some idea of making him a scapegoat.

Every inhabitant of Panama knew that if the United States were not allowed to build the Canal there, it would build one at Nicaragua, where an American company already had a concession. If that were done, not only would Panama lose all its hoped-for prosperity, but even the railroad might cease to operate and the whole local trade route wither and die. It was a matter of economic life or death for the whole Isthmian community—also for the New French Canal Company. There had been an almost continuous succession of unsuccessful revolts against Colombia on the Isthmus since 1885, culminating in a three years' war from 1899 to 1902. But the revo-

lution of 1903 was ably stage-managed by M. Bunau-Varilla.[1]

The local garrison had been unpaid so long and had so many local friends and sweethearts that it was soon won over. Everything had been arranged to have the revolution take place on the 4th of November, in the cool of the afternoon. But on the morning of November 3rd a Colombian battalion of four hundred conscripts and several generals arrived at Colon. The local officials of the Panama Railroad, in full sympathy with the revolution, refused to let this force ride except for cash fare, which it did not have. The generals went on by special train to Panama City, where they were seized and imprisoned by the revolutionists, who ran up a brand-new national flag and proclaimed the Republic.

When Colonel Torres, the officer left in command at Colon, heard this, he demanded that the generals be released and the flag hauled down, or else he would kill every American in Colon. The women and children at once took refuge on two steamers and the men gathered under arms in the stone freight-house of the Panama Railroad, which had been strongly built for just such emergencies. It was exactly what Bunau-Varilla had hoped for, remembering how our

[1] See Bunau-Varilla, *Great Adventure of Panama.*

naval forces had intervened to protect lives and property in 1885, and on several other occasions before or since. As a result of his perfectly proper and very tactful hints to President Roosevelt and Secretary Hay that another insurrection might break out on the Isthmus, the gunboat *Nashville* had been sent to Colon. Her commanding officer did not interfere in the least with the Colombian troops until after Colonel Torres lost his head and threatened a massacre. Then the *Nashville* landed sixty-two seamen and marines. After a demonstration in force against the embattled freight-house, Colonel Torres declared his great love for the Americans. Presently he and his conscripts were bought up by the insurgents, who now had possession of the Provincial Treasury at Panama City, for about twenty dollars apiece and shipped back to Cartagena on the Royal Mail liner *Orinoco*.

President Roosevelt instantly and joyously recognized the new-fledged Republic of Panama, and ordered our naval officers to prevent the landing of Colombian troops anywhere within fifty miles of either Colon or Panama City. Colombia naturally protested and promised to put down the insurrection in short order and then give us what we wanted in

the way of a treaty, if she were only allowed to land troops and fight it out on the only possible battlefield—the line of the Panama Railroad. This Roosevelt refused. By that refusal did Roosevelt violate Colombia's sovereignty over the Isthmus, as guaranteed by the United States in the Treaty of 1846?

In the opinion of Dr. Howard C. Hill, of the University of Chicago, whose scholarly and admirable thesis [1] is the last word on the subject, Roosevelt was guilty of a grave violation of international law. Taking the facts as set forth by Dr. Hill, I maintain that Roosevelt had the law on his side, as well as the gunboats.

The vital feature of the thirty-fifth article of the Treaty of 1846, as copied by Dr. Hill from the official records, is as follows:

". . . the United States guarantee, positively and efficaciously, to New Granada, by the present stipulation, the perfect neutrality of the beforementioned isthmus, with the view that the free transit from the one to the other sea may not be interrupted or embarrassed in any future time while this treaty exists; and, in consequence, the United States also guarantee, in the same manner, the rights of sovereignty and

[1] Hill, Howard C., Ph.D., *Roosevelt and the Caribbean.* Univ., of Chicago Press, 1927.

property which New Granada has and possesses over the said territory." [1]

Now just what were the rights of sovereignty and property which New Granada had and possessed over the said territory and beforementioned Isthmus of Panama in 1846? Let us turn to the opposite page of Dr. Hill's thesis, beginning at the top of the page:

". . . the republic of New Granada was created (1831), Panama being one of the eighteen provinces comprising the new state. The constitution recognized Panama's right to secede, a right she exercised in 1840, and for the next two years the isthmus was an independent republic." [2]

Under her own constitution, it appears that New Granada possessed the right in 1846 to do nothing whatever about it whenever Panama chose to secede and become an independent republic—and a precedent had already been established in 1840. This is very interesting.

"In the constitution as revised in 1853," continues Dr. Hill, "the right of each province to assume independence at any time was again recognized. Under this provision Panama four years later (1857) entered on a second period of independence, a period

[1] Hill, *op. cit.*, p. 39. *Senate Journal* (Twenty-third Congress, second session), p. 238.
[2] *Ibid.*, p. 38.

which lasted until 1863, when a new constitution was adopted and the present republic of Colombia came into being. As in the preceding constitutions, the right of secession was recognized in the document of 1863.

"For the next score of years Panama enjoyed practical autonomy. In 1885 she joined other provinces in an unsuccessful uprising against the tyrannical and unconstitutional rule of President Nuñez. Victorious over the insurrectionists, Nuñez declared the constitution of 1863 a nullity and assembled a convention controlled by himself to draft a new fundamental law. By the new constitution Panama lost her legislature and was made subject in all matters of consequence to the government of Bogotá. The discontent of the Panamanians at the situation cropped out from time to time in local insurrections and in participation in uprisings which affected the republic as a whole. Of this last nature was the revolt of 1899, an uprising which continued for three years." [1]

The decisive battle of that uprising was fought in and across the railroad yards at Panama City, in July, 1900. The fight was refereed by the captain of the U.S.S. *San Francisco*, who was there to enforce

[1] *Ibid.*, p. 39.

his ruling that the action must not begin until after the morning northbound express was well on its way and the operator had had time to climb down from the switchtower in the middle of the yards. (I saw that switchtower afterward but never did find time to count all the bullet-holes in it.) The surgeons and ambulance-parties of the *San Francisco* and H.M.S. *Leander* were standing by, on the side lines. It was ludicrously like a football game, until a sardonic, bald-headed American soldier of fortune named Rose ran his machine-gun up over the crest of Calidonia Bridge and caught a charging, cheering column of insurrectionists end-on, in close formation.

It was for a resumption of this sort of thing that the Colombian Government was asking when it requested permission "to land troops at those ports (Colon and Panama) to fight there and on the line of the railway." [1] Dr. Hill quotes with approval the deprecatory words of Mr. du Bois, our minister to Bogotá in 1912: ". . . President Roosevelt denied to Colombia the right to land troops upon her own soil to suppress a threatened revolt and maintain a sovereignty guaranteed by treaty stipulations . . . refusing to allow Colombia to uphold her sovereign

[1] *Ibid.*, p. 68.

rights over a territory where she had held dominion for eighty years . . ."[1]

Eighteen years, not eighty, would be more exact. The sovereign rights that Colombia was upholding by rifle and machine-gun rested, by Dr. Hill's own showing, on nothing firmer or more venerable than the fundamental law proclaimed by the victorious General Nuñez in 1885. Did the United States guarantee by treaty stipulations in 1846 the sovereignty that New Granada actually possessed at that time, or an entirely different "sovereignty" that was to be set up nearly forty years later by force and arms? The Panamanians never admitted that they had lost their constitutional right of secession; they were kept more or less in submission by force alone, and when in 1903 they had put themselves in actual possession of the Isthmus, they reasserted their sovereignty, as it had existed in law and fact, from 1830 to 1884. They proclaimed Panama an independent republic, as in 1840 and 1857. Had the fundamental law of Nuñez a retroactive power to change the entire meaning of the Treaty of 1846? President Coolidge, it will be remembered, protested strongly and successfully against a retroactive clause in the Mexican constitution of 1917. Unless we admit that Nuñez

[1] *Ibid.*, p. 68.

possessed the power, which we denied to the Mexican people and to ourselves as well, of making retroactive changes in domestic and international law, then the conclusion seems inescapable that President Roosevelt acted in 1903 in exact accordance with the strictest interpretation of the letter of the Treaty of 1846.

The Republic of Panama was quickly organized and a treaty signed between the two countries by which the United States received the perpetual right to build and maintain a canal across the Isthmus, in return for the payment of $10,000,000. It also acquired possession of the Canal Zone, a strip of land five miles wide on either side of the Canal, and this bit of Central America is now for all practical purposes as much United States territory as the parade-ground at West Point. The two cities of Panama and Colon, however, were scalloped out of either end of the Zone and left part of the republic; but their ports, Balboa and Cristobal, became American, and the United States obtained the right to keep Panama and Colon clean and to interfere whenever it thinks the native authorities cannot keep good order. Uncle Sam was determined to make an end of filth and fever and petty warfare on the Isthmus and get to work.

The New French Canal Company lost no time in accepting the $40,000,000, and its representative on

the Isthmus formally turned over possession to the United States on May 8, 1904. The task of building the Canal and governing the Zone was placed by an act of Congress in March, 1904, in the hands of the Isthmian Canal Commission, a board of seven men, appointed by the President and responsible to him through the Secretary of War. Rear-Admiral John G. Walker, an officer on the retired list of the United States Navy, who had already been at the head of two earlier commissions appointed to study and compare the Panama and Nicaragua canal-routes, was made the chairman. Major-General George W. Davis was made the Governor of the Canal Zone. The other five commissioners were expert engineers, and in July John F. Wallace became the Chief Engineer.

The Walker Commission held office for little more than a year. Under its leadership, law and order were firmly established in the Zone, many valuable surveys were made, a little dirt dug with obsolete French side-excavators in the Cut, the nucleus of an operating force collected, and the fight against fever begun by Dr. Gorgas. Under the circumstances, it was a very creditable year's work. For instead of being given plenty of money and a free hand to organize its campaign against the jungle, the I.C.C. was ex-

pected to make bricks, not only without straw but almost without clay. Instead of realizing that millions of dollars' worth of modern machinery must be bought, the dirt and disease of four centuries scrubbed away, and a great army of men enlisted, drilled, housed, and fed, Congress could think of nothing but the danger of another scandal like that of the Lesseps company, and kept doling out the money in grudging driblets, while the American people kept crying, "Make the dirt fly!" with the same thoughtless impatience with which the people of the North cried, "On to Richmond!" before Bull Run.

To make matters worse, the seven members of the commission, all honest and capable men, proved totally incapable of working together. They were perpetually at odds with the chief engineer, the chief sanitary officer, the Governor of the Canal Zone, and with each other. Requisitions made by Mr. Wallace or Dr. Gorgas were disregarded or granted only in part, after long delay. Convinced of the inefficiency of the seven-headed commission created by the Spooner Act, President Roosevelt sent a message to Congress on January 12, 1905, requesting such amendment of that Act as would enable him to select a smaller commission, preferably one of three mem-

bers. A bill to authorize such action passed the House, but failed in the Senate.

Roosevelt asked for the resignation of all but one member of the Isthmian Canal Commission in March, 1905. In an executive order addressed to the members of the new commission, on April 1st, he directed that the chairman, chief engineer, and Governor of the Canal Zone should constitute an executive committee, the first to reside in the United States and act as chief executive, the second to reside on the Isthmus and have full charge of construction work, the third to enforce law and sanitary regulations in the Zone. Quarterly meetings of the full commission were to be held on the Isthmus in January, April, July, and October.

Before the first of these sessions had been held, Mr. Wallace abruptly handed in his resignation, on June 28th. He was succeeded as chief engineer by John F. Stevens, who was appointed on July 1st. A few days later, Mr. Stevens received a letter from the chairman of the Isthmian Canal Commission, Theodore P. Shonts, about Major Goethals.

CHAPTER VIII

SHADOWS BEFORE

"NEW YORK,
July 5, 1905.

"DEAR MR. STEVENS:

"I have your favor of the 2nd, and regret to hear you are suffering from lumbago. I trust you will be out very soon.

"On the suggestion contained in your note, I have just cabled Dauchy as follows:

" 'Pending arrival of Chief-Engineer Stevens make no appointments, changes, or promotions except absolutely necessary to keep work in progress.'

"In addition to the telegram I sent you containing Ex-Secretary Paul Morton's testimonial of Mr. Story, beg to call your attention to an army officer whom Col. Edwards says is the ablest construction engineer in the army, and whom Secretary Taft speaks of also in the highest terms. His name is

Goethals. Edwards says he has had charge of very important work, and has always made good. He is direct, resourceful, energetic, and a worker of the most pleasing personality. When Secretary Taft spoke to me about him, I told him I would be glad to bring him to your attention. One thing about him: Being already an officer of the government, you could always depend on his services. At my suggestion, Secretary Taft wrote an order instructing him to report to you and left it on file in his office, so in case you should decide to get him for one of your assistants, the authority will be awaiting you . . .

"Yours very truly,

T. P. SHONTS.

"MR. JOHN F. STEVENS,
67 Lake Shore Drive,
Chicago."

The order referred to is still on file in the War Department. The following copy has been supplied by Major F. W. Whitly, U.S.A.

WAR DEPARTMENT
OFFICE OF THE SECRETARY

"MEMORANDUM for the Chief of Staff and for the Chief of Engineers:

"I am convinced that Major Goethals can be of great use in the construction of the Panama Canal. It may be that he will be appointed one of the chief assistant engineers, if Mr. Shonts requests it. I desire that he be retired from the General Staff and be assigned to this work in any capacity that the Commission may designate. The Commission can be trusted to make a sufficient salary allowance in addition to his own salary to compensate him for the additional risk and labor. This will become operative only, however, upon action by the Commission and is left as a memorandum of my direction in that event, and it is either for the Assistant Secretary of War or the Chief of Staff as the case may be.

"WM. H. TAFT,
Secretary of War.

"June 30, 1905."

The chairman's action in leaving it to his nominal subordinate, the chief engineer, to decide whether or not he wanted Goethals for an assistant, was both characteristic and proper. Although a practical railroad man, Shonts was not a trained engineer, while Stevens was a past master in railroad construction work. Unlike the army engineers, however, he lacked experience with locks and dams. He could have had

Goethals' assistance for the asking, but did not choose to ask.

Goethals at this time seems to have had no knowledge that he had been recommended for service at Panama, nor did he evince any particular interest in the Canal, even when he made his first visit to the Isthmus in 1905. In October of that year Secretary of War Taft directed General Story, Chief of Coast Artillery, Colonel Clarence Edwards, Chief of the Insular Bureau, Lieutenant-Colonel Black, Major Goethals, and Lieutenant Marke Brooke of the Corps of Engineers to accompany him to Panama for the purpose of determining certain questions relating to the fortifications required for the defense of the Canal Zone. The party left Washington in the evening of October 27, 1905, for Fort Monroe and there boarded the cruiser *Columbia*, which sailed next morning and arrived at Colon November 2nd.

Unfortunately, Goethals wrote no detailed account of his impressions of the Isthmus in 1905. Afterward he expressed them in one apt word, "Chaotic." Garbage was still drifting at high tide among the piles supporting some of the dreary board shacks of Colon. One street would be deep in foul mud, the next torn up for the long-delayed sewer and water-pipes, the third trim with new macadam and concrete sidewalks.

Long strips of paper peeling from every house-front told of sealed rooms where fumigation had killed the *stegomyia* during that year's epidemic of yellow fever, when thirty-five American employees had died and hundreds more fled north as fast as they could find passage in the crowded ships.

"There are three diseases in Panama," observed Big Smoke Stevens, as his men had already nicknamed the new chief engineer who kept burning up cigars like Grant in the Wilderness. "They are yellow fever, malaria, and cold feet; and the greatest of these is cold feet."

Transferring practically the entire excavating force to municipal engineering and the sanitary squad, Stevens threw himself, shoulder to shoulder with Governor Magoon into the fight behind Dr. Gorgas. The fight was won, the epidemic stopped, and the panic with it, by the end of September.

The wharves of Colon and Cristobal were clogged with congested freight, the lagoons with half-sunken dredges. The Panama Railroad train that took the Secretary and his party across the Isthmus was a rattling relic wheezing over a worn-out roadbed; Gatun, a toy village with a tin church on an island where the narrow ditch of the French Canal cut across a bend of the Chagres; Culebra Cut a series

of illustrations for H. G. Wells' stories of the future, where saplings sprouted out of rusty smokestacks and luxuriant creepers covered the picturesque ruins of nineteenth-century railroads and uncouth dead machines. A big new American steam-shovel, a big new American locomotive hauling new flat-cars loaded with heavy rails, belonged to the new age. On the way to the National Palace, the presidential victoria jolted its distinguished passenger past portable stone-crushers crunching up seventeenth-century cobblestones to make the concrete base for the new brick pavements of Panama City.

Picturesqueness, progress, politics—did Major Goethals care for none of those things? Was he solely interested in battery positions, ranges and fields of fire, as he and the other two engineers and the Chief of the Coast Artillery inspected fortification sites on both sides of the Isthmus?

"I roomed with General Goethals on the *Columbia*," writes Major General Black, "and as far as I know, no special comments were made on the Canal work, nor did he show any very special interest in that work."

Mr. George M. Wells, a civil engineer who had gone to the Isthmus in the very first shipload of American employees in 1904, remained until the

Canal was built, and then became associated with Goethals in private practice, declares: "At the time the General visited the Isthmus, accompanying Mr. Taft in 1905, I saw him at Ancon but did not actually meet him at that time. To the best of my recollection, he was not in uniform. . . . During my association with the General in business in New York, he told me many details of his first visit to the Isthmus in 1905, while he was still a member of the General Staff. From a public standpoint, he was supposed to have gone to the Isthmus in the matter of fortifications. Actually, if my recollection of the General's story is correct, Mr. Taft had the General accompany him for the purpose of securing his advice on the ground in connection with the chaotic condition of affairs then existing on the Isthmus. . . . Mr. Taft, as you know, had even as early as that time a very high opinion of the General's judgment, which subsequently resulted in Mr. Taft's selection of the General to succeed Mr. John F. Stevens in the spring of 1907."

Back in Washington, the Major carried on with his duties at the General Staff and the War College. At times they seem to have bored and depressed him. Colonel George H. Morgan, a West Point classmate

who had pleasant memories of Goethals as a cadet, found him in no pleasant mood as a staff officer.

"What was my surprise to find him later, at the big camp during the 'Third Battle of Manassas' in 1904, most pessimistic as to everything connected with the Army as it was then. As things were slowly shaping toward our ultimate goal, I had become inured to the slowness of events, but was surprised at his bitterness. He was then on the General Staff.

"However, in 1910 I think it was, while at Fort Sam Houston, Goethals dropped in on me, when he was en route to Mexico City where a dam, built on the same theory controlling the Gatun Dam, had collapsed and he naturally wished to know why. He was a changed man from the pessimistic grouch of Manassas. He had a job up to his size and was entirely happy and satisfied."

George, the elder son, had entered West Point in 1904; Tom was at a private school, preparing to enter Harvard. Their father was teaching at the War College, their mother keeping house at 1903 S Street, Washington. The memorandum for the Chief of Staff and for the Chief of Engineers remained unacted upon by the Isthmian Canal Commission and unknown to Major Goethals. Various picturesque stories have been told and printed about Goethals'

first interview with President Roosevelt. The facts leading up to that interview are as follows:

In January, 1907, Mr. Shonts asked the President to accept his resignation as chairman of the Isthmian Canal Commission, in order that he might accept the position that had been offered to him as president of the projected Interborough-Metropolitan Company, a merger of the subways, elevated and street railroads, of New York. "With extreme reluctance," Roosevelt accepted his resignation, to take effect on March 4th, in a cordial and heartily appreciative letter from the White House, January 22, 1907.[1]

Two days later, Chief-Engineer Stevens received at Culebra an official cablegram from Joseph Bucklin Bishop, secretary of the Isthmian Canal Commission, advising him of the resignation of Chairman Shonts and the President's acceptance. Mr. Stevens at once cabled the President, "Request no action until matter thoroughly discussed."

Roosevelt cabled back on January 25th: "Do not understand what your cable refers to, but of course will take no action until I hear from you."

Mr. Stevens wrote and mailed directly to the

[1] This letter is printed in full in W. L. Pepperman's *Who Built the Panama Canal?* pp. 238-239. New York, E. P. Dutton & Co., 1915.

President a five-page typewritten letter, setting forth at considerable length his desire to leave the Canal and government service altogether and go back into railway work. He had expected to have more time in which to make up his mind on this point, but the sudden and unexpected resignation of Shonts had forced his decision. This letter, dated from Culebra, January 30th, was received at the White House on February 12th. It was immediately sent by the President to the Secretary of War, with a covering note asking Mr. Taft to "please come over in the morning and see me about it."

"The President and I," wrote Mr. Taft, when asked to make a statement about what had transpired at this interview, "agreed that a change should be made. He put to me the question whom I would recommend from the staff of the Corps of Engineers. I had consulted General Mackenzie, who was then Chief of Engineers, and he recommended Major Goethals for the place as the fittest man. He had been serving as assistant under General Mackenzie for some time. I brought this recommendation to the President. The President, after talking it over with me, and possibly with General Mackenzie, agreed to the selection recommended. . . .

"This is my recollection of the way the choice came

to be made. It was really the selection of General Mackenzie, approved by the President after an examination of the record. . . .

As the Chief Justice points out, this is only a general recollection, twenty-two years after the events described. He insists on transferring the credit for the selection of Goethals from himself to General Mackenzie. A dissenting opinion is entered by Mr. William Loeb, then President Roosevelt's private secretary, who writes:

"You are correct that the then Secretary of War Taft recommended Major Goethals to the President to take charge of the building of the Canal. I remember I was present at the opening of the interview on Major Goethals' first call on the President. The President stated that Secretary Taft had recommended him highly for canal work. . . ."

There is a legend on the Isthmus, sometimes repeated in print, that "About three hours after the letter reached Washington, Mr. Stevens received a cablegram, 'Your resignation accepted.' [1] This is picturesque but inaccurate. The President's cablegram was not sent until February 14th, forty-eight hours after the letter of January 30th reached Washington,

[1] Abbot, William J., *Panama and the Canal,* p. 191. New York, Dodd, Mead & Co., 1914.

and read, in part: "I acquiesce in your desire to be relieved as soon as your successor can be appointed and has familiarized himself with the work under you. . . . Have written in full."

In the letter that he wrote and mailed to Mr. Stevens on the same date, the President said: "At the earliest possible moment I shall send to the Isthmus some man to take your place, probably an army engineer; and I of course expect that you will continue to perform your present duties not only until his arrival, but until he has been with you a sufficient time to become thoroly familiar with the exact condition of the work. Damage would be done if you left before the man was on the ground and had time thoroly to familiarize himself with the exact situation so that the work may continue without a break."

It was not until four days later—six days since the arrival of Mr. Stevens' letter of resignation—that President Roosevelt sent for the army engineer he had selected to replace both Shonts and Stevens. On the evening of February 18th Major and Mrs. Goethals were entertaining an old West Point friend, Colonel Fiebeger of the Class of '79, when a White House servant arrived with this invitation:

"THE WHITE HOUSE
WASHINGTON
February 18, 1907.

"MY DEAR MAJOR GOETHALS:

"The President would like to have you come in and see him tomorrow (Tuesday) morning at half past nine. Will you please let me know if you will be able to come?

"Very truly yours,
WM. LOEB,
Secretary to the President.

"MAJOR GEORGE W. GOETHALS, U.S.A.,
1903 S Street."

Greatly surprised, for he had never met the President in his life, nor could he imagine why the President should be sending for him now, the Major went to the telephone to notify Mr. Loeb that he would be in attendance in the morning. He left the instrument and came back into the living-room, looking more surprised than ever.

"The President wants me to come straight over this evening, instead, at twenty minutes past ten." [1]

At this point Mrs. Goethals probably hurried him straight upstairs to put on his full-dress uniform,

[1] Verified by a last-minute entry in the White House appointment-book for this date.

though neither she nor Colonel Fiebeger has the faintest recollection as to whether or not he wore it to the White House that night. All they can remember is the agony of impatience with which they awaited his return.

CHAPTER IX

"I'LL GET ALONG WITH THE MEN"

"I WAS assigned to duty at Panama in connection with the Canal on February 18, 1907," Goethals wrote in a hitherto unpublished manuscript. "On the evening of that day I was summoned to the White House by President Roosevelt. He entered at once upon the subject of the Canal, expressing great regret that he found it necessary to make a change in the management of affairs on the Isthmus, because of the resignation of John F. Stevens, the second Chief Engineer in charge of the work. He said that it was impossible to think of a successful prosecution of the work with frequent changes of leadership, since an efficient and permanent force could not be maintained under such conditions, and that he had decided to place it in the charge of men who could not resign unless he desired them to do so—to place the task in the hands of Army engineers, thereby securing continuity of service.

"After explaining the composition of the reorgan-

ized commission that he proposed, he added that he had decided to appoint me Chief Engineer as well as chairman of the Commission, believing that by combining the two positions the friction which had at times existed between the holders of them would be eliminated. He expressed regret that the law required the work to be placed in charge of a commission or executive body of seven men, as this proved to be a source of trouble and friction, but as he had failed in his endeavor to get the law changed, it was necessary to work under it. Experience was to show that his various efforts to work under the law through changes in the organization of the Commission were so unsuccessful that he resolved to assume powers which the law did not give him but which it did not forbid him to exercise."

In the opening words of this manuscript, Goethals declared: "The real builder of the Panama Canal was Theodore Roosevelt. The execution of the work was directed by other hands, chosen and empowered by him, but if he had personally lifted every shovelful of earth in its construction he could not be more fully entitled to chief credit than he is for the accomplishment of the task."

To justify this statement Goethals cited, first, Roosevelt's securing the abrogation of the Clayton-

Bulwer Treaty, which, by its provision for joint control by the United States and Great Britain of any Isthmian canal that should be built by either country, had absolutely barred any project of the kind from 1850 to 1901. In the second place, Roosevelt "took Panama" in 1903; in the third, he brought about the decision that a lock instead of a sea-level canal should be built, and finally he concentrated "absolute power in the hands of the men in supreme charge of the work."

Roosevelt on his part said: "Colonel Goethals proved to be the man of all others to do the job. It would be impossible to overstate what he has done. It is the greatest task of any kind that any man in the world has accomplished during the years that Colonel Goethals has been at work. It is the greatest task of its own kind that has ever been performed in the world at all. Colonel Goethals has succeeded in instilling into the men under him a spirit which elsewhere has been found only in a few victorious armies.[1]

Each was eager to give the other the fullest credit and highest praise. Two strong, aggressive personalities, Roosevelt and Goethals worked together with-

[1] *Theodore Roosevelt, an Autobiography*, p. 543, Macmillan, New York, 1916.

out friction or jealousy, from the beginning to the end. Complete trust met with utter loyalty. Between this President of the United States and this officer of the United States Army ran a strong bond of personal fealty and devotion, as between a Count of Flanders and a Goethals of the Middle Ages, giving and receiving a turbulent fief to hold and rule with the high, the low, and the middle justice.

The public, as yet, knew nothing of this drama of resignations and appointments that was being played behind the scenes in January and February, 1907. Popular interest in Panama was chiefly directed to the discussion in Congress and the newspapers of the proposals that had been called for on October 9, 1906, and submitted on January 12, 1907, for digging the Canal by private contract. Goethals and Stevens both agreed with President Roosevelt that the only two bids worthy of consideration at all should be rejected, first because the contractors would have to operate on borrowed capital, which would have reduced their own profits to an inadequate compensation for their skill, experience, and personal supervision of the work—if indeed they could have borrowed any capital at all during the financial stringency that gripped the country only a few months later. In the second place, the contract in

its main features had been formulated by Mr. Stevens, who was expected to supervise the work as Chief Engineer. His withdrawal took away the last reason for having the Canal built by private contract, instead of directly by the government, using the organization that Mr. Stevens had built up.

As his assistants and colleagues on the reorganized Isthmian Canal Commission, Goethals chose two competent and experienced fellow officers of the Corps of Engineers, Majors William L. Sibert and David DuBose Gaillard. Their appointments and his, the President's acceptance of the resignations of Shonts and Stevens, and the rejection of the bids were all made public together on the 26th of February. Headlines announced that the Army was to build the Canal; cartoons showed columns of infantry, shouldering picks and shovels, and batteries of dump-carts on the march to the Isthmus. Disappointed contractors accused one another, Wall Street, and the government; Senator Tillman shouted that "Hocus-pocus had entered the game" and moved for an investigation.

"Today the whispers, winks, and chuckles were much in evidence. It was definitely established that the anti-Roosevelt Senate crowd had planned a big probe of tangled Canal affairs for next winter. They

will probe for mud with which to plaster the President and Taft. And the President, by turning handsprings in Panama affairs, by permitting confusion to be daily worse confounded, is playing into the wily hands." [1]

Breathing the sewer gas of public life for the first time, Major Goethals wrote to young George at West Point: "This being a public character is getting too wearing to be pleasant." That was on the first day of March; on the second he became a Lieutenant-Colonel of Engineers. This promotion was in the regular order of seniority in the Corps, and had nothing whatever to do with his appointment as Chief Engineer of the Isthmian Canal Commission, but the coincidence was naturally misinterpreted.

"Early publication of the appointment has made things hum here and I am unable to get by myself," he wrote to George on March 5th. "Notoriety doesn't suit me at all. Things are pretty badly upset on the Isthmus. . . . We will just have to make the best of it. Stevens is made chairman of the Commission and will remain so until he leaves, when I will succeed him. . . . We called on Mrs. Stevens Sunday and she gave most glowing accounts of the house and most encouraging statements as to the climatic and

[1] *New York Times*, February 27, 1907.

health conditions. . . . The Engineers gave me a dinner at the Raleigh last night and I feel like a 'biled' owl this a.m. . . . My address will be Col. G.W.G., Isthmian Canal Commission, Canal Zone, Panama."

In reply to the congratulations of his friend, Mr. Henry C. Meyer of New York, he wrote: "It's a case of just plain straight duty. I am ordered down—there was no alternative."

Under the inevitable headline of the period: "Off to See the Dirt Fly," the newspapers announced his sailing, with about forty members of Congress—the session was over and the probe getting under way—from New York in the *Panama*, on March 6th.

"Colonel Goethals smiled when asked if he would make a statement concerning the canal work. 'I will know more about it when I get back,' he said." [1]

"The trip thus far," he wrote George on Sunday, March 10th, off the southwest part of Haiti, "has been delightful, and I have entirely shaken off or overcome the result of the nervous strain under which the publicity of this thing put me. I seemed completely done up Tuesday, and I don't believe I could have endured the strain much longer. The President gave the thing out of his own volition, because—as

[1] *New York Times*, March 7, 1907.

a newspaper man said—he couldn't keep it to himself. The sea trip has braced me up. . . . The Congressmen are not the drawbacks I thought they would be, and there are many pleasant chaps among them. The most amusing are those who have never been at sea before, and who think they are remarkably good sailors because they have not felt anything worse than a slight discomfiture since the first day. . . . We haven't had any sea that the old *Warren*[1] couldn't easily take. This outfit is now anxious to see a good storm, but I am in hopes that they won't get it on the downward trip, (Tues. P.M.) and they didn't, though I had to stop writing, for we began to roll most violently, and kept it up until we reached Colon this morning. We are located at Ancon Hill for the present—the guests of Dr. and Mrs. Gorgas. He met us at the pier with Mr. Stevens, and, as the latter didn't seem inclined to take us into his house, we accepted the former's invitation to come on with him. We came to Panama, lunched at the Tivoli Hotel, and then moved to the hospital grounds. Mr. Stevens has done an immense amount of work and things look so much better than they formerly did that it is very encouraging."

"The magnitude of the work grows and grows on

[1] The District Engineer's boat at Newport, R. I.

me," Goethals wrote after five days of inspection tours; "it seems to get bigger all the time, but Mr. Stevens has perfected such an organization so far as the R.R. part of the proposition is concerned, that there is nothing left for us to do but to just have the organization continue in the good work it has done and is doing. As I go out over the line and see what he has accomplished, and the organization that he has perfected, I cannot see why he has resigned. It is lonely and isolated, but then too I think he has broken down with the responsibilities and an evident desire to look after too many of the details himself. He hasn't any assistants on whom he can throw off matters, preferring, as I understand the situation, to decide everything himself, and in this respect the job is too great. . . .

"There is a force of 29,000 men actually at work on the line, so you see we have quite an army to supply and look after. The force is composed of men from all localities, and Lt. Wood, who called on us last night, said they are expecting a shipment of Greeks. They have French, Italian, Spanish, and negroes from the West Indies. While there are malarial fevers of all types, the number of sick is relatively small.

"My impressions before I came down were natu-

rally those that I took with me from the last visit, when everything was in a more or less chaotic condition, generally more so, so I have been agreeably surprised at things as they are. Mr. Stevens has done an amount of work for which he will never get any credit, or, if he gets any, will not get enough. . . ."

"The work is all absorbing and its magnitude enormous," the Colonel wrote on March 22nd. "As the head of everything here, I will not be able to do much with the details of the engineering, but I am going to make the others work. Mr. Stevens has accomplished things. He is a railroad man and is thoroughly familiar with that end of it. As a consequence, the R.R. part of the work is in excellent shape, and under a good organization which I shall keep. The hydraulic part of the proposition is not so good and is away behind. He has been unfortunate in his selection of men for this part. He found here an old Mississippi River Assistant Engineer, an excellent man at dredging, but who has had no work on foundations and locks and is therefore no account. As Mr. Stevens wanted other men, this man has brought other dredge men down. I believe in giving men a chance to learn, but in a work of this kind we cannot afford to educate the head men. This will need reorganization, and yet not to demoralize the

other branches of the work we have to be careful in making changes. I am very agreeably surprised at the conditions as I find them. Mr. Stevens has done work along the lines that our training hasn't taken us, and the lock and dam propositions I do not fear nor dread. The hard part of the work is not going to be the Engineering end.

"Last Saturday, the members of the Corozal Club gave a smoker and they insisted on my going out—they wanted to see me—I went by leaving the American Minister's where I was dining, immediately after dinner. I had to make a speech—I enclose you a copy—the chairman who introduced me gave me my clue. . . ."

It was no friendly audience the Colonel found waiting for him that night at Corozal. The Canal men were bitterly resentful and sullenly suspicious. The politicians up in Washington were taking away Big Smoke Stevens and sending down an army officer to make everything military. They'd show him what the men on the job thought of him and his militarism.

Their state of mind was well shown in an article that had appeared two weeks before in the leading local newspaper:

"Next to the announcement of Mr. Stevens' resig-

nation, the rejection of the bids for contract work was the most surprising bit of news received during the past week. . . . The disappointment that attends this fact is not lessened by the information that a military man will be in charge of the work on the Isthmus. . . . We do not wish to make any unpleasant predictions, but the new experiment on the Isthmus will be followed with curious interest, and if it works well we shall be pleased. It may be as well to prepare ourselves for certain changes in method which will no doubt follow the proposed departure. It is unlikely that the rank and file of the canal workers will be made to go about in uniform and other military accouterments. But we mustn't be surprised if the men are enlisted instead of employed hereafter; if they are required to answer roll-call every morning before turning out to work (or drill); if they will be obliged to salute their superior officers while in the Cut (or at the front). . . ."[1]

The chairman of the meeting, to judge from his introductory remarks, seems to have learned this editorial by heart. He and the rest of them were ready to show this shoulder-strapped colonel what the men on the job thought of him and his militarism.

Their first surprise came when the new Chief

[1] Panama, *Star and Herald,* March 8, 1907.

Engineer appeared in plain white civilian clothes. What followed was most vividly recalled by Governor Goethals in his farewell speech to his fellow members at the annual banquet of the Society of the Chagres, March 6, 1915:

"Eight years ago today I sailed from New York to assume charge of this work. On the 17th of March, eight years ago, a smoker was given at Corozal to which I was invited. I attended. The cheering was all in favor of Mr. Stevens. Any reference made to his successor was met with cold silence. The toastmaster, whom I see here tonight, made some remarks about the Army, suggesting to a party of Congressmen who were present, that if in going round the work they should see the men suddenly drop their tools, assume the attitude of a soldier, and make a military salute, they should not consider the men 'loco,' but simply preparing for the new administration which was to assume charge. [Addressing Mr. Kyte] You remember that, Mr. Kyte? Those remarks, coupled with other insinuations and slurs upon the Army, rather irritated and angered me, and I made my maiden speech. At that time I told you men, as you may remember if you were present on that occasion, that I would look after your interests as they would be my own; that every man would

have the right of audience—and that promise I have kept." [A voice: "You bet you have!"]

"I will say," concluded Goethals in that maiden speech at Corozal in 1907, "that I expect to be the chief of the division of engineers, while the heads of the various departments are going to be the colonels, the foremen are going to be the captains, and the men who do the labor are going to be the privates. There will be no more militarism in the future than there has been in the past. I am no longer a commander in the United States Army. I now consider that I am commanding the Army of Panama, and that the enemy we are going to combat is the Culebra Cut and the locks and dams at both ends of the Canal. Every man who does his duty will never have any cause to complain on account of militarism." [1]

"I tried to disabuse their minds of the idea of militarism," he wrote in that letter to his son at West Point. "They say I made a hit. I have run across men that I have known before. I'll get along with the men."

[1] Bishop, J. B., *The Panama Gateway.*

CHAPTER X

BOTH FEET ON THE GROUND

A VIVID illustration of the suspicious and hostile attitude of many members of Congress toward the Canal at this period is drawn in two successive letters of Colonel Goethals to George, at the end of March, 1907. A very important party of Representatives, on a tour of the West Indies, had stopped at La Guaira, a port where there was yellow fever and against which a quarantine had been imposed by the sanitary authorities of the Canal Zone. When they arrived at Colon, the Congressmen demanded to be set ashore at once, but, in Goethals' words: "Dr. Gorgas . . . refused them permission to land until the expiration of the quarantine limit—six days from the time of leaving La Guaira, which limit expires tomorrow. They refused to recognize Dr. Gorgas as the court of last resort. Mr. Stevens approved his action if I had nothing to say to the contrary—and I hadn't. They are reported as being a rude lot, but they have got to take their dose. Laws are made to be obeyed, even by Congressmen. . . ."

But that very afternoon, some one told the Congressmen, as Goethals wrote in his next letter, that "the medical officers had let in passengers on an excursion boat that had been out of La Guaira but three days, and as a consequence there was a fearful rumpus raised. They let up on the quarantine and permitted them to land yesterday. They are hot against Gorgas, claimed that they were kept on the ship so that Mr. Stevens could keep them in ignorance of actual conditions here, etc. They were ugly and anything but pleasant traveling companions, and this was particularly true of Mr. —— of ——, who made a fool of himself. He ought to have been spanked, for he behaved like a spoiled boy and made very insulting remarks about the Canal and its officials. They would accept no favors from anybody, particularly the I.C.C. (Isthmian Canal Commission), carried their lunches with them in paper boxes and ate them en route, so as to avoid going to the Commission's hotel. We left Panama at 7.05, met them about eleven miles out from Colon, and then came back with them to Panama. They were so ungracious and ungentlemanly that I told Mr. Stevens I could not go back to Colon with them, and he said he was going to get off when the train reached

Culebra, so I bade them adieu at Panama at 3.30 yesterday."

This childish exhibition of bad manners had the good effect of creating a friendly feeling of fellow-suffering between the old and the new Chief Engineer. They parted cordially in private, but Goethals tactfully declined the invitation to be present at the demonstrative public farewell given by the Canal men to Mr. Stevens when he sailed.

Goethals took charge, as he observed, on April Fool's Day. On April 4th he wrote: "The strenuous existence of the past seems like child's play to the last five days. I am in full charge and control now, and in addition, I am in receipt of a cable announcing that I have been elected president of the Panama Railroad and Steamship Co. . . . The Secretary [Taft] arrived Saturday morning on the *Mayflower*. He brought down three consulting engineers to consider the suitability of the rock for lock foundations. I spent Sunday with them, getting back just in time to get to a dinner in honor of the Secretary, at the American Legation. Immediately after the dinner there was a reception and that continued until twelve. As we could not leave until the Secretary did, it became awfully hard, especially as my day's work

had tired me, anyhow. On Monday I had to cover the same ground . . . in addition to an examination of quarters, etc., at points along the line. We didn't get back until nine and after that I had another session with the Secretary. We are getting altogether too 'chummy.'

"Tuesday I went to the office to look at the mail and to meet delegations from the steam-shovel men, the locomotive engineers and railway conductors—all of whom are threatening to resign if their pay is not increased. The Secretary was to meet the steam-shovel men, and the others also asked the same privilege. He thought I might settle the questions, but I had no such hope. The minor differences were adjusted, but of course the increase of pay they stuck to, so I arranged for their meeting the Secretary at Colon yesterday afternoon and got back to Ancon at 7.30. Then had to dress for a reception by the President of the Panama Republic to the Secretary. This was another twelve-o'clock performance.

"Yesterday we left at eight o'clock for Colon, where the party inspected the municipal work that we are doing; went out to the reservoir, and after lunch had a hearing of Panamanians in regard to certain improvements we are requiring them to make. It was very long drawn out and tedious. After that

we had the proposed strikers, and their cases are to be considered by the Secretary and decided from Cuba, where the Secretary expects to be after a few days. The Secretary expected to go out to the ship at six—so I ordered the special train to be ready then. The would-be strikers didn't talk themselves out until 7.45; I then hoped to return, but—there were a few last words and nothing would do but I must go out to the ship to late dinner with him and discuss some final points with him.

"This I had hoped to escape. The *Mayflower* was anchored about half a mile out, and there was a very heavy sea running, with the wind increasing. There was nothing to do but go. It was too rough for the steam-launch, so we went out in a cutter and the captain's gig—a regular whaleboat type of craft. I think you would have enjoyed the way we were tossed and rolled about, with the water that was thrown upon us by the breaking of the waves. It was worse beside the ship, and in trying to make the companion-way I slipped into the water, getting wet from my knees down, but doing no other damage. I had a good dinner and was hungry enough to thoroughly enjoy it. I finished up with the Secretary at 9 P.M. and started on my return to the shore. I got wet through, for the waves were breaking on the return trip.

"We left Colon by special at 9.40 and reached here at 11.45, completely tuckered out. The Secretary is going to give me full and free swing. I haven't asked for a thing that he hasn't given me. Well, I am glad to get into harness and in full swing on my own account. Loafing around wanting to do and unable to has been awfully irksome and wearing. A necessary condition, perhaps, but I am glad that it is over."

Then the Colonel settled down and began to work. He moved from Ancon, with its social distractions, to the house vacated by Mr. Stevens at Culebra. "Since I came here," he wrote to George at West Point, "I have been confined to the office almost continuously from 7.30 A.M. to 10 P.M. It's rather strenuous but I manage to sleep and eat well, and I am better off occupied, for outside of the work there is absolutely nothing to do. I get a sort of 'brain fag' that knocks out all thought or desire of reading."

Presently, however, he admits that this sort of thing is "getting to be rather wearing. I have just concluded that I am going to get out on the line willy-nilly, and start in on Monday by spending every other day going over some part of the work and then tending to office matters betweentimes. . . . Of course, it takes time to get the run of things—but

I must get exercise—more than I do—hence my decision to go out anyhow. Things will straighten themselves out some way."

Soon, indeed, instead of devoting alternate days to the field and the office, Goethals was making a regular practice of going out on the line every morning and returning to his desk at Culebra every afternoon. He had brought an American stallion down from the States, for pleasure and exercise, but found little or no time for riding. After his mount was accidentally killed by a railroad train in November, 1907, the Colonel never replaced it. Instead, he rode everything in the way of rolling stock from the private car *La France*—the French left us three sumptuous private cars on a railroad less than fifty miles long—to a freight caboose or an engine cab. When he saw something that looked interesting, he would drop off and investigate. He got his exercise scrambling up and down the terraced sides of the Cut or swinging briskly along the roughly-laid construction track. Drill-runners and crane-men, eating at the oilcloth-covered table in some small commissary mess along the line, found him seated at their elbow and sharing the thirty-cent meal. Managers and stewards began to realize resentfully that every day was a possible inspection day. But one steward

snapped smartly to attention and saluted the white-clad figure coming in through the door; to the astonishment of a Canal man who had been sharing a seat in the day coach with the affable stranger in white, and telling him how he guessed he wouldn't stay any longer on the Isthmus, now that the Army was going to run things. *He* was going to Ecuador, where he had been offered a position at five thousand a year. The stranger had shown great interest, asking the Canal man what he was doing and what he was getting for it. The Canal man had added 50 per cent to his own actual salary, just to make it impressive.

"Say, who is that guy?" he asked the steward, as soon as Goethals had sat down among the roughnecks.

The steward, who had been a sergeant in E Company, 2nd Engineers, enlightened him rather grimly.

Soon it was only a newcomer to the Isthmus who could not recognize the Colonel as soon as he came in sight. The trouble was that no one knew when or where to expect him. One morning he entered a district health office on the stroke of eight. An American clerk and one or two black West Indians were at their desks, but the health officer had not yet arrived. When he did, he found the Colonel waiting for him.

"Why are you nearly half an hour late reporting for duty?"

"I was out inspecting my district, sir," replied the health officer, visibly ill at ease.

"Where?"

"The garbage-dumps over in Guachapali, sir."

The Colonel looked intently at the health officer's carefully pressed white duck trousers and immaculately pipe-clayed canvas shoes—after an alleged inspection trip over the filthy slime of Guachapali dumps.

"The next time that you are half an hour late getting down to work, see that you have a more convincing excuse," he said as he left the office without stating the purpose of his call.

"Heretofore," the Colonel wrote to George, toward the end of April, "the Chairman, the management of the railroad and the Chief Engineer were all separate functions, but now that they are concentrated into one, it's pretty hard at times, but I'm not going to squeal. Having the other Engineers here to help me lets me throw a great many of the engineering questions over to them, and to devote my time to other matters."

On one day devoted to these "other matters" than engineering, Goethals conferred at great length with

Dr. Gorgas over the details of the Sanitary Department and also "went over affairs of police, fire department, courts, tax collectors, municipal improvements, schools, etc. Starting in on my arrival in town at 7:50, I kept at it until 5.15, when I left Col. Gorgas to catch the 5:30 train out."

"I presume I am burdening myself with many details that Mr. Stevens trusted to his private secretary, but this, though I have the same man for the position, isn't satisfactory. Things are working out satisfactorily, though, gradually, and I had enough experience of papers in the Chief of Engineers' office to handle them quickly. . . ."

Dissatisfied with the private secretary he had inherited from the Stevens régime, Goethals was in a quandary. He discussed the matter with one of the new Commissioners, the Hon. Joseph C. S. Blackburn, of Kentucky. Blackburn, who had been for many years a member of the United States Senate, told Goethals that he had just the ideal man in mind: William H. May, who had been the private secretary of Blackburn's friend, Senator Gorman of Maryland, who had recently died. On Blackburn's unqualified recommendation May was offered the position and accepted. With Bill May as private

secretary, the Colonel was well served. No chief ever had a more efficient or loyal aide to handle the multifarious details of his office.

At this period, Goethals speaks of the Isthmian Canal Commission's meeting in "continuous session," and his reason for assigning the members to their various departments and duties: "Sibert's experience on locks and dams makes his assignment to that work very necessary. Rousseau, the navy man, is a crackerjack on buildings, machine shops, etc., . . . so Gaillard had to take the Cut."

Colonel Gorgas, who had always been at the head of the Sanitary Department, was now a Commissioner. Mr. Mark Sullivan, in the first volume of his history, *Our Times, the United States, 1900-1925,* makes the following statement, on pages 446 and following:

"Gorgas, seeing a better system of administration in force, a fellow army officer at its head, and himself a member of the Commission, hoped he would now be allowed to fight disease in his own way. Once more was he disappointed. The trouble arose from Chairman Goethals' demands on his organization for greater economy and more efficiency. Goethals regarded no record as perfect. He spurred his men on to do more work at less cost. Gorgas in his sanitary

work was spending about $350,000 yearly,[1] a modest sum compared with the millions that were annually being poured into the project for other purposes than sanitation. The good health of the construction personnel, upon which the entire project rested, was being bought at a cost relatively trifling. Yet Goethals professed to consider this an extravagance. As he had done four years before with Admiral Walker, Gorgas argued with Goethals, always pleading to be allowed to do his own work unhampered and in the manner which experience had taught him was best. One day, after a particularly trying discussion, Gorgas almost lost his temper. Goethals had said to him:

" 'Do you know, Gorgas, that every mosquito you kill costs the United States Government ten dollars?'

"With a smile just faintly tinged with malice, Gorgas replied:

" 'But just think, one of those ten-dollar mosquitoes might bite you, and what a loss that would be to the country.'

"Yellow fever," continues Mr. Sullivan, "was not the only disease to engage Gorgas's attention at the Canal. From the beginning he had also laid plans

[1] There are no exact figures. Gorgas himself estimated the cost of the sanitary work at about the equivalent of a bottle of beer a day for each workman.—Mr. Sullivan's footnote.

to eliminate malaria. . . . Between 1906 and 1913 the proportion of Canal workers admitted monthly to the malarial wards of the hospitals dropped from 40 to 10 per cent of the whole. The reason why the decrease was not greater was given by Gorgas in a speech at St. Louis in 1915:

"'I was much disappointed that we did not get rid of malaria on the Isthmus of Panama as we did at Havana; I had fully expected to do so, and when we went to the Isthmus we put into effect the same antimalarial measures that had been so successful at Havana. These measures were vigorously pushed for the first four years. At the end of our four years of work, May, 1908, all power on the Isthmus was concentrated in the hands of a single man, the chairman of the Commission. This officer thought it advisable to make certain radical changes in the methods of sanitation. These changes, ordered by the chairman, took execution of the antimalarial work out of the hands of the sanitary authorities and placed them in the hands of men who had no special knowledge of antimalarial work. I argued against these changes as forcibly as I could, but to no avail. Looking back over my fifteen years of experience in tropical sanitation, I believe that if I could have con-

tinued at Panama the same methods that I had used previous to 1908, the results would have been the same as at Havana, and the Canal workers would have been as entirely free from malaria as were the citizens of Havana.' "

The publication of these statements in Mr. Sullivan's book induced General Goethals to write him, on April 12, 1926, a long letter in which, after calling his attention to certain errors of facts and dates, and making denial of certain remarks attributed to him at the time of his appointment,[1] Goethals replied to the Gorgas matter as follows:

"The discussion on page 468 between Gorgas and myself never occurred and there is no foundation for it. I did not prepare the estimates for sanitation; I accepted those submitted by Gorgas. I did not defend the estimates, but allowed him to do so. Under those circumstances I was not responsible for costs.

"With the authority of the Executive Order of 1908, I determined to reorganize the construction forces, since Commissioners need no longer have charge of 'departments.' In May, 1908, Mr. Taft visited the Isthmus for the purpose of relieving Jackson Smith, against whom attacks had been launched

[1] These statements were deleted in the later editions of Mr. Sullivan's book.

in the United States by labor organizations, the Civic Federation, merchants, and others.[1]

"While he was there, I explained the organization I had partially lined up, the difficulties that would be remedied and the results that would be accomplished. He inquired what I intended to do with the Sanitary Department, and I remarked, 'Nothing.' He commented on the criticisms that were being made of the expense and that something should be done, for everyone recognized the fact that Gorgas was not an administrator. I explained that I did not care to take the responsibility of ordering any change, for should an epidemic occur I would have to take the responsibility, but if he or Congress should order it I would obey.

"He had decided to send Colonel C. A. Devol, whom I did not know, but for whom he had the highest regard, to head the Quartermaster's Department, which was to replace Labor, Quarters, and Subsistence. He didn't see why, as in the Philippine Islands and at Army posts, the medicos couldn't prescribe the work that should be done and the Quartermaster carry it out. It was possible that such an arrangement could be effected, but I told him I

[1] For the Jackson Smith episode, see pages 177 and following.

would not undertake it without the consent of Gorgas.

"I saw Gorgas, explained the reorganization of the construction forces I was going to put in effect on July 1st and the proposed changes in personnel. I outlined the scheme indicated by Mr. Taft by which the present sanitary inspectors would prescribe the area and time for grass-cutting, the sanitary engineers (all acting under his orders) would outline the areas to be drained and the methods to be followed, this to be done in conjunction with the engineers in charge of Canal work, while he would retain entire charge of oiling the streams, etc., sanitation of the terminal cities and quarantine. The oiling of the streams and marshes outside of the habitations controlled the breeding-places of the malarial mosquitoes. I pointed out that such an arrangement would reduce the cost of grass-cutting, for no additional labor would be required, as was necessary at that time. Ditches which are made today without any regard to the Canal construction work would no longer be destroyed as the work progressed, while the oiling would be in his hands. He was sure it wouldn't work, and I asked him if he would discuss the matter with

Mr. Taft, who had made the suggestion, in view of the latter's knowledge of and faith in Colonel Devol.

"The upshot of the matter was that Colonel Gorgas had told me later that while he was sure it wouldn't work, he was willing to try it for six months. I accepted this with the understanding that if results proved the 'prescripiton method' satisfactory it would be continued; otherwise, we would revert to the existing way of doing things, but modify the ditching so that it would conform to construction plans and progress.

"The change was made effective July 1, 1908. Satisfactory results were determined by the malaria rate. . . .

"Being fully conversant with sanitary statistics and having been assured that the method could not work satisfactorily, I naturally looked for a higher malarial rate to follow its inauguration, particularly with the approach of fall, when sickness was always on an increase. Such, however, was not the case, for the rate continued to decrease. There were obstacles, failure to play the game on the part of some of the sanitary inspectors, but these were taken care of. At the end of the six months' period, Gorgas came to have the work turned back to him, as the new method had not worked, he claimed. The records showed

that grass was cut over greatly increased areas for less money than formerly; ditching was done better and more cheaply than formerly, and the sick rate (the real test) had actually and consistently diminished during the six months' period. Under these circumstances I declined to make the change. No further discussion of the matter ever occurred and the sick rate continued to decrease. As he had full charge of the areas to be oiled, he was at liberty to cover the entire Zone if he so desired, and thereby might have eradicated malaria entirely.

"This covers more space than I expected and I apologize for inflicting you, but you have the advantage in that you can cast it into the waste basket when you become weary. So many erroneous statements have appeared recently in stories of the Canal that when it came to 'History' I concluded I would get it out of my system."

Mr. Sullivan wrote back: "As to the variation between your recollection and General Gorgas's, of course I shall take account of that, too. The Gorgas version, as you probably know, appears on his authority and on that of Mrs. Gorgas."

Both the "ten-dollar-mosquito" story and the extract from the speech at St. Louis appeared origi-

nally in General Gorgas' biography,[1] together with numerous disparaging remarks on General Goethals, to which he paid no attention, until they were incorporated in Mr. Sullivan's *History of Our Times*. Then Goethals set forth his side of the case, here submitted.

Any future historian making an investigation into this episode should go to the primary sources—the records and statistics of the Sanitary and Engineering Departments, and the local censuses of 1906 and 1912, as a useful check on the estimates of population.

Diametrically opposite was the perfect understanding that existed between Goethals and the naval member of the Commission, Rear-Admiral H. H. Rousseau, now Chief Coördinator of the Veterans Bureau. They worked together without mistrust or friction. Of Admiral Rousseau's services in building the Panama Canal, Goethals said in 1913:

"His technical training and previous experience, combined with his executive and administrative ability, fit him admirably for his position. He has had charge and supervision of shops, municipal work, building construction, terminals, and the design and construction of dry docks and coaling stations. His

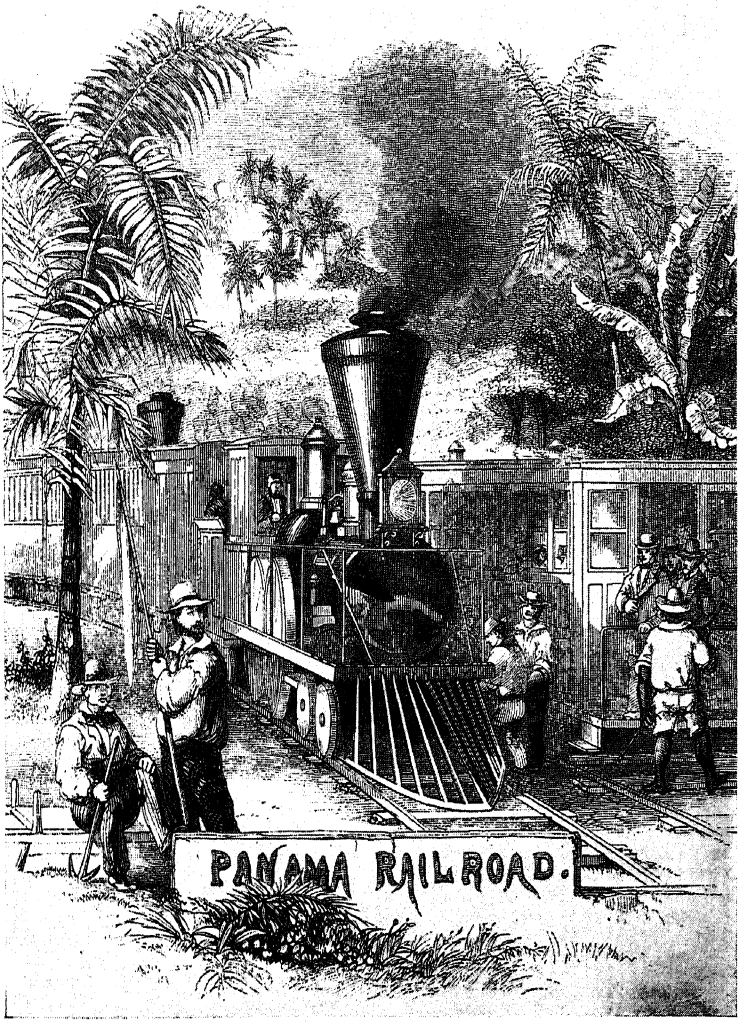
[1] Gorgas, Marie D., and Hendrick, Burton J., *William Crawford Gorgas, His Life and Work*. New York, Doubleday, Page & Co., 1924.

counsel in questions of organization, cost-keeping, and the preparation of estimates has been invaluable, and, in his way, he has been as indispensable to me as Colonel Hodges.[1] Twice has the Navy Department desired his return to Washington, and on one occasion the Secretary of the Navy especially requested the President for his relief from duty on the Isthmus in order that the Navy Department might avail itself of his services." [2]

The services of Colonel Sibert and Colonel Gaillard will be dealt with in the next chapter. Ex-Senator Blackburn of Kentucky, who earned Goethals' undying gratitude by making him acquainted with Bill May, was the head of the Department of Civil Administration, with the courtesy title of "Governor." He had commanded a brigade in the Civil War and flew the Confederate battle-flag from his official residence on holidays. When the destroyer flotilla under Leiutenant-Commander (now Rear-Admiral) H. I. Cone put in at Panama in 1907, Colonel Goethals stepped up to where his fellow Commissioners were seated at the official banquet and said in his most peremptory undertone, "Somebody here has got to make a speech and make it quick!"

[1] See page 203.

[2] Bishop, J. B., *The Panama Gateway*, p. 182.



THE FIRST RAILROAD TO CONNECT THE ATLANTIC AND PACIFIC OCEANS

Governor Blackburn instantly responded with a glorious burst of old-fashioned Southern oratory that welcomed the navy in proper style and deeply impressed the Panamanians present. Like Byron's verse, his rhetoric bore translation well. No one could have been better suited for relieving the Colonel of the burden of making speeches and extending official hospitality.

Finally, there was Mr. Jackson Smith, newly appointed to the Isthmian Canal Commission, but a veteran Canal man. He remained at the head of the very important Department of Labor, Quarters, and Subsistence. To him belongs much of the credit for recruiting, housing, and feeding the army of workers on the Isthmus. Undeniably, living conditions in the Zone were far better in the spring of 1907 than they had ever been before; unquestionably, they were still capable of improvement. Suggestions to this effect, however, were anything but welcome at the Department of Labor, Quarters, and Subsistence. Jackson Smith liked to settle things by rule and formula. He was known as "Square-foot" Smith from his rule of allotting housing space according to a man's salary —one square foot of floor for every dollar of pay. This idea saved a great deal of arguing and was

adhered to after his time. His other formula was far less defensible. Whenever any Canal man complained of poor food or lodging or unfair treatment by some one in Smith's department, Jackson Smith was much too fond of answering, "Well, if you don't like it down here, there's a boat leaving for the States every five days."

Perhaps the fairest judgment ever passed on Jackson Smith was by Colonel Goethals in a confidential report to the Secretary of War: "With respect to Mr. Smith, I am convinced of two things: first, of his ability, as indicated by his work at the head of the department of which he is in charge; and second, that his unpopularity is so pronounced as to interfere seriously with the efficiency of his department.

"It cannot be denied that there has been, and still is, a great deal of complaint about quarters. To a degree, at least, this condition is unavoidable. I have no doubt that very much of the blame placed upon Mr. Smith, in this regard, he did not deserve, but he accepted it without complaint or protest. I am equally sure that a very large proportion of it could have been avoided if his manner and treatment of the subject had been different."

Later, the Colonel said, "He has been bred in a hard school and it has made him hard."

The clash between them came at the end of April.

"There is a gang down here," the Colonel wrote to George, "that has been rather antagonistic. I have felt it, rather than having any evidence of it until Tuesday, when one of the party in the Commissary announced to the General Auditor that if I made a change in his purchasing, as he heard that I intended doing, he would quit. The method of purchasing is not regular, according to our lights, so I stopped it Friday. Saturday morning, I got a telegram from him saying that if the order stood, he must resign. I took the bluff and relieved him by telegraph. Last evening he wanted to withdraw, but it's too late. It will help bring the outfit into line. I can stand it if they can."

"Strenuosity is the order of the day," he continued in his next letter, "though I am getting more used to the situation and the work rolls along more easily, and the men are falling into line, after the call of the bluff put up by the manager of the Commissary. I went over to Colon on Monday and there I heard that it was all a mistake about the telegram that Mr. ——, the manager, had sent—that I misunderstood the situation, etc.—that he would knuckle down—but the order had been issued and I would not give way.

Lieutenant Wood is in charge of the hotels and mess-houses which were to cause trouble, so they said, if I made the change, so I just put it up to him to make good, and I have had no trouble since, or rather, as yet."

It was a decisive victory for the new régime. The bluff had been called and the outfit fell into line. As one of the Canal men expressed it, they had found out that, "when the Colonel gives an order, you can't hold a town-meeting on it." And now, when a man had a complaint to make about food or quarters, nobody was going to tell him that if he didn't like it on the Isthmus there was a boat leaving every five days. That was over. The work rolled along more easily.

"It is plain to me," so Joseph Bucklin Bishop, secretary of the Isthmian Canal Commission, wrote to President Roosevelt by the first mail after he had been transferred from Washington to the Isthmus in August, 1907, "that the work is well in hand, and that the Colonel is becoming daily more the master of the situation. He looks worn and tired and says that he has had a veritable 'hell of a time,' but I believe he has won out. When I told him so, he said, 'Well, I don't know.' I think, however, that he feels

that the worst has passed and that it will be smoother sailing in the future. Of course on this point I can speak with more knowledge after I have been here longer."

"Another week of observation," he wrote on August 18th, "has confirmed my view sent you at first that things are going very well indeed here. Everyone assures me that the discontent and uneasiness which followed the departure of Stevens have nearly passed away and that the 'kickers' are diminishing in number and importance daily. Of course there will always be some of them here, but I am convinced that there are no more of them here now antagonistic to Colonel Goethals than there were against Stevens in his most popular days.

"There is no doubt about it—the Colonel has demonstrated his ability to manage the job. Nobody questions that now. I attended the first meeting of the Commission that has been held since my arrival, a few days ago. It was a *real* conference. Each member took part in it and each showed a thorough knowledge of the whole work. The contrast with the meetings of the old Commission in which only the Chairman and Chief Engineer took an active part, is very striking. The present body is a real working

combination of able and intelligent men, all keenly interested in the work and all actively engaged in it. There is slight friction now and then. As Colonel Goethals tells me, everybody down here seems to develop a large crop of corns and it is difficult to step without treading upon one. It is due to the climate, doubtless, and takes the form most often of acute sensitiveness as to the preservation of prerogatives. The Colonel sees the humor of it, and so gets on very well with it. So far there has been very little of it in the Commission itself."

But only twenty-four hours later, he amends this statement, giving a most illuminating glimpse into the inner workings of statecraft.

"Supplementing my letter of yesterday, I wish to say that after a long talk with the Colonel this morning I find him convinced that the Commission is a cumbersome and ineffective body in many respects—that the Chairman is powerless, though he has the veto power, in all cases in which a majority may form against him, and that he is in constant fear that such a combination be formed. His desire is for the abolition of the Commission and the creation of an organization, consisting simply of a Chief Engineer, Assistant Engineer, and an Executive Officer, the

Division Engineers in charge of the work to constitute an advisory body. In this way there would be no division of authority; no opportunity for combines or dissensions. I gather that there have been some discords already in the Commission and that others are apprehended, but that there has been no serious trouble. Of course the Colonel has no idea that I am writing on this to you."

This letter was mailed directly to President Roosevelt, who opened it with his own hands. It was written in longhand, because, as Joseph Bucklin Bishop explained in the next of these confidential letters: "I am afraid to have them typewritten, for everything 'leaks' here and the fact that I write to you would be certain to be distorted." The air was thick with distorted facts and assorted lies about Panama, that summer of 1907. Theodore Roosevelt wanted to know the truth and to have the truth made known.

"I cannot say how pleased I am at what you say of the conditions at the Isthmus . . ." he replied. "Give my warm regards to Colonel Goethals and say that what you tell me as to his great success is what I anticipated but it is none the less welcome to hear. And do tell him, if you think wise, that he must not

permit himself to get run down, and that he must come up here for a holiday whenever it is necessary."

"Colonel Goethals is delighted beyond measure by your message to him," answered the no less delighted J. B. Bishop. "It gives him courage and adds to his confidence in his own powers. That he has been greatly cheered by it is obvious in his entire bearing.[1]

"You will remember that Jackson Smith said to me in Washington that the reason why the Colonel wished to have me on the Isthmus was that I was 'too close to the President.' That was a perversion. The Colonel said to me a few days ago that the chief reason why he wished to have me here was that he desired 'to get the truth straight to the President,' and he knew I would be able to do that. He said, not knowing that I had been writing to you, that he wished I would write to you freely and fully about matters here, for all he asked was to have you know the truth; that he was afraid of nothing except misrepresentation. Your letter came just in time to furnish evidence to him that my services had been just what he desired. It was one of those manifestations of a clear mental understanding between you and me which

[1] On May 25th, after the long-threatened strike of the steam-shovelmen had come at last and fizzled out in a few days, the Colonel had written to George: "Washington is the only thing that troubles us. . . ." With the President squarely behind him, he was free to work without worrying about attacks in the rear.

have occurred so many times. When I gave your message the Colonel quietly smiled, merely repeating that all he wanted was to have the truth known to you.

"Well, I have told you the truth as I see it, and it is greatly to his credit. Every hour I pass here increases my admiration for him as a man, and my belief in him as *the* man for this task."

"Evidently Goethals is exactly the man for the work," replied Theodore Roosevelt. "How fortunate we have been to get him!" Later he declared, "I shall back up the Colonel on all points."

This pledge the President immediately translated into action. Joseph Bucklin Bishop had already "suggested to the Colonel that he send you, in the absence of Secretary Taft, a special cable on the first of next month, giving the result of the August excavation and work, and he accepted it at once and asked me to prepare it. I shall do this, probably about the fourth or fifth of September, and if you think it wise you can give it out to the press. All the papers will be compelled to publish it then and we shall get the widest hearing for it. It will justify the demand the Commission is to make for the deficiency appropriation."

The cablegrams were sent accordingly:

"CULEBRA, Sept. 4, 1907.

"PRESIDENT ROOSEVELT,

Oyster Bay, N. Y.:

"August excavation from the Canal Prism by steam shovels and dredges, 1,274,404 cubic yards. . . . This exceeds all previous United States' records. Highest preceding total for the Canal Prism was 1,058,776 cubic yards for July. Rainfall, 11.89 inches.

"GOETHALS."

"OYSTER BAY, N. Y.,
Sept. 5, 1907.

"GOETHALS, Culebra:

"I heartily congratulate you and all the men on the Canal for extraordinary showing you have made during the month of August. As this is the height of the rainy season, I had not for a moment supposed you would be able to keep up your already big record of work done, and I am as surprised as I am pleased that you should have surpassed it.

"THEODORE ROOSEVELT."

"Your cable message in reply to that of Colonel Goethals on the August excavation was capital and

gave him unbounded delight and encouragement," wrote the shrewd old newspaper man who had suggested it in the first place. "He says it will be of incalculable aid to him in every way, chiefly by showing to the organization that you are solidly behind him and are pleased with his leadership. It had literally the effect of a message of commendation to the General in the field from his Government. It will put an end to malicious rumors as to his lack of hearty support at Washington, and will convince the few remaining malcontents that it would be prudent of them to 'get on the band-wagon.' You have rarely performed a more valuable public service."

Both cablegrams were published on the first page of the second number of the *Canal Record,* the newly-established official weekly newspaper, published under the authority of the Isthmian Canal Commission, at the suggestion of Mr. Bishop.

"Its effect upon the men," he had written in his first letter to the President from the Isthmus, "would be most beneficial, for they would be stimulated to fresh energy and rivalry by knowing what their fellows are doing all along the line. At present they know nothing, save through gossip, of what is being done anywhere except in their own section."

What the *Canal Record* did for the men on the

Isthmus was very much like what the *Stars and Stripes* did for the A. E. F.; it showed every man what the other fellows were doing all along the line. It stimulated the growing feeling of team-play and solidarity that was welding the huge, heterogeneous working force into a unified, well-disciplined, and enthusiastic whole. Moreover, by supplying every editor and member of Congress with the plainly-stated and well-authenticated facts about the Canal, it helped remove the long-established conviction in the public mind that nothing good could come out of Panama.

This change of opinion was strikingly manifested when the members of the Appropriation Committee came down in November. Most of them had been in the party of Congressmen that had been quarantined and exasperated in March, when one very powerful member of this Committee had talked loudly and unpleasantly about "quarantining your appropriation." This was not easy to forget, especially since the speeding-up of excavation had brought about the urgent need of an eight-million-dollar deficiency appropriation.

"When they landed," the Colonel wrote to George, "they were critical of everything, talked of extravagance, etc., objected to special trains and carriages,

and when the estimate for special trains came up, I just told them that very frequently something would come up necessitating my presence somewhere on the line—and it meant a special or not go. Mr. Tawney [1] stopped the discussion, saying that I was to have whatever I wanted and there was to be no discussion on the subject.

"Mr. —— of —— I dreaded more than anyone.[2] While not a member of the Committee, he came along for the purpose of nosing around. His attitude last spring was hostile, but he is entirely won over. Just before leaving, he came to congratulate me on the very favorable impression that I made on the Committee, and the conviction that they all had of my thorough grasp and control of the situation. Mr. ——, in knocking around on the work while the hearings were going on, had talked with everybody that he met and was pleased to note the spirit of contentment and confidence that the men displayed and showed in me, and assured me that if there was any special legislation that I desired, he would secure it, if I would only let him know what."

Reporting to the President, and noting with satisfaction that nearly all the information obtained by

[1] Chairman of the Appropriation Committee.
[2] The "spoiled boy" who "deserved to be spanked."

the Committee, as its members admitted subsequently, had already been printed in the *Canal Record,* Joseph Bucklin Bishop said: "Colonel Goethals has made a convincing impression on them as a complete master of the job. I was present at all the hearings and I have never witnessed a more complete demonstration of mastery than he made. He was from beginning to end the leader of the organization. Not only did he show that he knew his business thoroughly, had absolute grasp of the work as a whole, but that he had at his tongue's end more knowledge of details than any of his immediate subordinates. . . . The net result is that the Committee will carry to Congress the report that all is going forward wonderfully well here, that the Commission is an efficient body, that in Colonel Goethals it has a remarkably competent leader. and that the proper course to pursue is to back them up and let them alone as completely as possible. . . ."

"There is only one man who should be heard at Washington on the Canal, and that is Goethals. He has absolute knowledge, perfect manners, and can talk. I hope you will see a great deal of him when he goes up. You will have to seek him, for he is not a butter-in and will wait for orders. He says I am the man who should be spokesman rather than he, but

don't let him persuade you into such a belief. He is the man at the helm, and he alone is fully competent to speak. When you and Mrs. Roosevelt become acquainted with him you will discover that his personality is as charming as his abilities are preëminent.

"Tawney told me this morning that Congress would legislate this winter on the subject of Zone Government—that at present that government was by Executive Order alone, and must be changed. The Colonel thinks, as I do, that no form of government should be adopted which does not leave control absolutely in the hands of the head of the Commission."

President Roosevelt had already written to his old friend and future biographer: "I am not surprised that the Colonel finds the Commission a cumbersome body.[1] . . . Whether we get the change of law or not, he shall really have all the powers he would have if he were the Chief Engineer in sole charge of the work, with the executive under him and the other engineers as an advisory board.[2] . . . Tell Goethals, for me, to go ahead and prepare the governorship business as he desires . . . and I will promulgate the proclamation." [3]

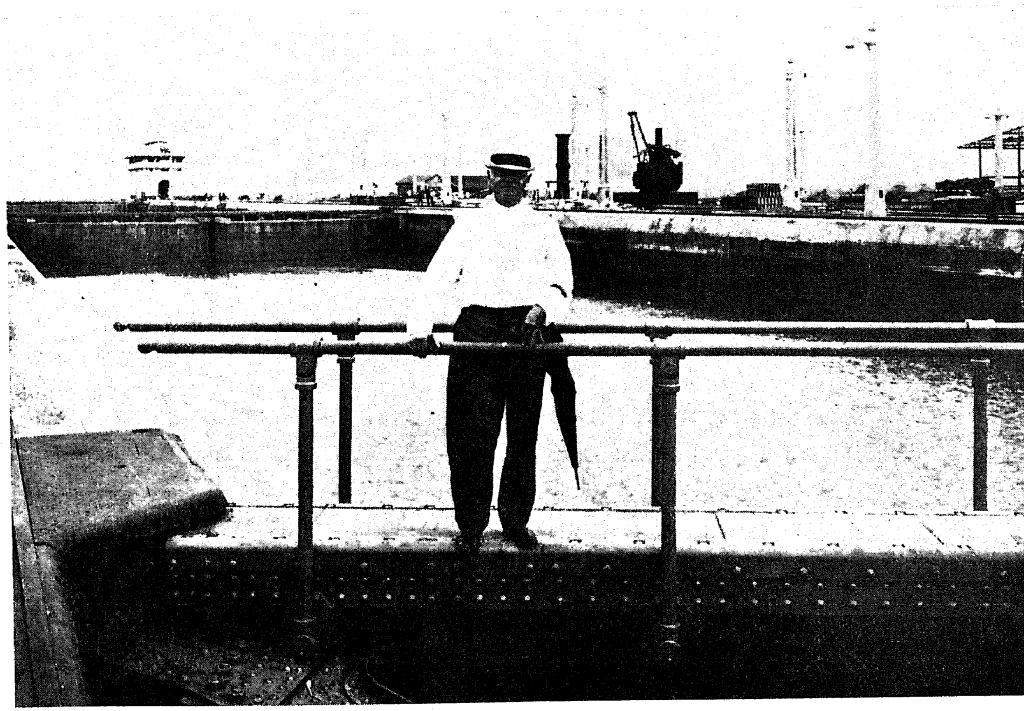
Thus authorized, the chairman and the secretary of

[1] Theodore Roosevelt to J. B. Bishop, August 29, 1907.
[2] *Ibid.*, September 6, 1907.
[3] *Ibid.*, September 16, 1907.

the Isthmian Canal Commission had joyfully collaborated in writing an executive order for the President to sign, as they had already sent him, at his request, a list of the things they would like him to say about the Canal in his next message to Congress. "In substance," Mr. Bishop wrote to President Roosevelt, "it abolishes all departments, puts every branch of the service here, including that of Civil Administration, under the control of the Chairman and Chief Engineer, who will assign such persons as he may select to duty at the head of each branch. This would . . . put complete power in the Chairman's hands and would make impossible the friction and annoyance which the present system causes at several points."

When Colonel Goethals went up to Washington in January, 1908, he took with him the finished draft of the proposed executive order, which had been prepared with the assistance of Mr. Richard Reid Rogers, chief counsel to the Isthmian Canal Commission, and submitted it to his superior, Secretary Taft. Knowing, of course, that the Spooner Act imposed an executive of not one but seven heads, the future chief justice observed, "That's the way it should be, but it isn't law."

Nevertheless, he indorsed it, smiled, and said to



COLONEL GOETHALS ON ONE OF THE INTERMEDIATE GATES, GATUN LOCKS

Goethals: "Tell the President that while that's what we'd like, it isn't in accordance with the law."

When Goethals had delivered his message, Theodore Roosevelt said: "I don't give a damn for the law; I want the Canal built!" [1]

He signed the executive order of January 8, 1908, making Goethals the absolute head of the Isthmian Canal Commission and the Panama Railroad and Steamship Company, the absolute ruler of the Canal Zone, answerable only to the President of the United States through the Secretary of War.

"There!" he said, emphatically. "I will give you all the power I can. If you want more, take it, and I'll approve your action."

Standing erect, Goethals exclaimed, exultantly: "Now, I have both feet on the ground and I'll build the Canal!"

[1] Letter of George W. Goethals to Mr. Mark Sullivan, April 12, 1926.

CHAPTER XI

THE CHIEF ENGINEER

WHEN Colonel Goethals took over the work at Panama, the type of canal he was to build had already been determined. A solution had been found for the great problem of how to control the Chagres River. That troublesome stream, turning away from the hills at Bas Obispo, curved back and forth across the proposed line of the Canal down to Gatun. There the valley is only about a mile and a quarter wide. Close that gap with an artificial hill—which is precisely what the so-called dam really is—and you accomplish two things; first, by backing up the river you form a deep lake to float your ships up against the slope of the hills at Bas Obispo and give you so much less digging through the nine miles of the Culebra Cut; and second, by so impounding its waters, you prevent a flood, such as used to cause a rise of twenty-five feet overnight in the river, from raising the level of the lake by as many inches.

The man who first suggested Gatun as the logical

place to build a dam was Godin de Lépinay, at the International Canal Congress in Paris in 1879. A trained engineer with actual experience in tropical countries, he had asked searching questions of Ferdinand de Lesseps that completely exposed the impossibility of building the proposed sea-level canal at the proposed cost. Lesseps would not permit his proposition to be put to a vote, but time has vindicated Godin de Lépinay.

Bohio was the site selected for a dam and locks by the New French Canal Company, and by the Walker Commission in 1901. But when the Americans actually began construction work on the Isthmus in 1904, our engineers ran surveys and made drillings at Gatun, as a possible dam site. One of these civil engineers made the incredible blunder of using, instead of a core-drill, one that chopped and ground its way through the argillaceous sandstone underlying the proposed site for the locks, bringing up finely-crumbled material as evidence for his statement that at least one lock and half another, if built, would rest on nothing firmer than sand and gravel. He persisted in this opinion even after test-pits had been sunk large enough to convince himself that he was standing on solid rock.

A newspaper correspondent saw water in the test-

pits after a rainy night in the wet season, and started the story that all Gatun lay over an underground lake. The sand-and-gravel story was kept alive and improved by making it quicksand. No fable was too fantastic to be told about Gatun. It was the focal point of attack for enemies converging from widely different sources: the sea-level advocates, the last of the Nicaraguans, the political scandal-hunters, the engineers who wanted a lot of little dams instead of one big one, people who wanted the Canal built by private contract, and those that wanted no Canal anywhere at any price. All of these centered their propaganda around Gatun. First honors in fiction should have been awarded to the yellow journalist who in 1912 observed a slight slump on the north slope of the dam. The southern or lakeward slope was absolutely intact, and not one drop of lake or river water was going anywhere except where it belonged. Nevertheless, this man cabled a story that appeared on the front page under the shouting headline:

COLLAPSE OF GATUN DAM!
Chagres River Plunges Through Gap in Isthmian Wall.
Engineers Face Problem

But long before this our Army engineers had faced and solved the problems involved, with characteristic

thoroughness. A large-scale model had been built to test the materials that were to be used, under similar circumstances, on the great dam itself. It was not in the least like a wall, but a gently sloping hill. Two trestles were driven across the valley, and from these were dumped many train-loads of selected rock from Culebra Cut, to form what the engineers call the "toes" of the dam. To fill the space between them, dredges pumped in muddy water that filtered out through the cracks of the toes, leaving the sediment it carried to settle and form a solid core of hard-packed sand and clay over a quarter of a mile thick.

The dry fill of the toes was to be carried to a specified height and distributed so that a cross-section of the two toes would resemble two wedges, with their points in the air, and the hydraulic fill between them an inverted wedge, with its point down. The correct relative proportions between wet and dry fill were exactly specified, as were the kinds of material to be used in each. Investigations made by Colonel Goethals, after the slight slump that made so much disturbance in the newspapers, showed that, contrary to his orders, the wet fill had been allowed to encroach at that point on the dry, and that the material pumped into the dam contained a much larger percentage of clay and finely divided substance, and

correspondingly less sand and grit, than was anticipated or was used in the model dam. The stuff had a heavy, creamlike consistency and slid under pressure. The error was rectified and the work completed without further mishap.

No one could read the correspondence in this case without realizing that here, as elsewhere, Colonel Goethals was in command. He made use of the power given him by the executive order of January 8, 1908, to reorganize the construction force. Abolishing the old, overlapping Departments of Excavation and Dredging and of Lock and Dam Construction, in July, he established the Atlantic, Central, and Pacific Divisions, sharply defined geographical units, under Sibert, Gaillard, and Williamson. Each of these three divisional engineers was given full power and held strictly responsible for practically everything outside of sanitary and police control within his district. All three of them were brilliant and able men, but the ultimate authority and final responsibility rested with the Colonel. When any one of his men was attacked by an outsider, Goethals set lance in rest and came spurring to his vassal's defense in true feudal style.

"Sir," he wrote to the editor of the *Engineering Record,* "my attention has been called to the com-

munication in your issue of October 14, 1911, signed 'Karl,' in which reference is made to the cost of concrete in the locks at Gatun, Pedro Miguel, and Miraflores on the Panama Canal. The article was correct as to the facts, but, without its proper relation to the causes underlying the differences in cost, it might be construed as a direct criticism of my valued subordinate, Lieut.-Col. Wm. L. Sibert, Corps of Engineers, U. S. A., to whom I have assigned the direction of the construction of the locks at Gatun. . . . Briefly, the difference in cost of concrete in place at Gatun and in the locks of the Pacific Division is due to the cost of rock, sand, cement, and to a difference in local conditions.

"The decision to procure rock at Porto Bello for the concrete at Gatun, now recognized as a foolish one, was made in the administration of my predecessor as Chief Engineer, and was concurred in by me to the extent that I approved all that he had done, and gave the order for the crusher plant and loading system that he had planned. Colonel Sibert was not consulted in any way and cannot be held responsible, therefore, for the fact that this rock costs $1.50 a cubic yard more than a suitable rock does at Miraflores. The decision to procure sand at Nombre de Dios was made by me, upon recommendation of a

board composed of Lieut.-Col. H. F. Hodges, Major Chester Harding, and Mr. S. B. Williamson. Col. Sibert was not consulted. In making the decision with regard to Porto Bello rock and Nombre de Dios sand, we underestimated the cost of towing through the heavy seas that characterize the Caribbean coast of the Isthmus. . . ."

Money might have been saved, but something else would have been lost to the Canal men sent to those old Spanish ports, whose names call up brave old memories of Columbus, Ojeda, Nicuesa, Drake, Morgan, Jenkins' Ear and Admiral Hosier's Ghost. Twice our suction-dredges at Nombre de Dios struck the hull of a sunken galleon and brought up skulls, cannon-balls, and pieces-of-eight. At Porto Bello we had to tear down the Iron Castle of St. Phillip before we could strip the headland and bare the bed-rock for the high-placed quarries from which the stone could slide down by gravity to the crushers and bins at the waterside. There, too, we dug up plenty of rusty round-shot. Laden with sand or crushed stone, strings of barges put out from these ports whence the Plate Fleet had sailed ballasted with silver and gold. Sea-going tugs towed them through the ever-rolling ground-swell into Limon Bay and up the straight four-mile sea-level channel to Gatun,

while the outlandish-looking, stern-wheel steamer *Exotic* tugged more barges, with Portland cement brought down from the United States in the *Ancon* or the *Cristobal.*

At Gatun, the cargoes of all these barges were snatched up by giant unloader-cranes and put into storehouses, out of which, like chicks from a brooder, ran intelligent little electric cars that needed no motormen but climbed of themselves up into the attic of the dusty mixing-house. Here, eight huge rotary mixers churned the three elements, cement, sand, and stone, into concrete, and dropped it wetly into great skips or buckets, two of which sat on each car of a somewhat larger-sized system of electric trains whose tracks ran along one side of the swarming lock-pits. Presently those skips would rise in the air and go sailing across the lock-pit in the grip of a carrier traveling on a steel cable stretched between two of the tall skeleton towers that stood on either side of the lock-site. When the skip was squarely above one of the mighty steel molds, as tall as a six-story house, it was lowered, tilted, and sent flying back along the cableways. Jonas Lie immortalized the amazing spectacle of the shuttling skips against the tropic sky in his picture: "The Heavenly Host," one of the twelve paintings by that artist of the

Canal under construction which have been purchased by an anonymous donor and presented to West Point in memory of General Goethals.

A great artist in steel was Colonel (now Major-General retired) Harry F. Hodges,[1] the designer of the locks, dams, and regulating works of the Canal. Goethals had wanted him on the Isthmian Canal Commission in 1907, but at that time the Chief of Engineers insisted on keeping Hodges as his chief assistant. Remaining in Washington, he was made chief purchasing officer for the Commission, placed in charge of its office there, and of the designs for the lock gates. He had designed the steel gates for the great Poe Lock on the Sault Ste. Marie Canal and was preëminently fitted for the work intrusted to him at Panama. Colonel Hodges was appointed to the Commission and transferred to the Isthmus in July, 1908, ostensibly to succeed Mr. Jackson Smith, then resigning, and to replace the Department of Labor, Quarters, and Subsistence with a Quartermaster Department on the Army model. That was soon done, but Colonel Hodges' talents were not to be wasted on housekeeping. His task was to erect forty-six pairs of gates, each seven feet thick, sixty-

[1] General Hodges died since this was written, September 2, 1929.

five feet long, and from forty-seven to eighty-two feet high, to install the valves in the intricate system of conduits, some of them big enough to run railroad trains through, to set up and connect the elaborate machinery for opening and closing these valves and gates, and to make the Chagres River provide the power for operating the locks by driving, with all the force of its once-dreaded floods, the hydro-electric station at Gatun Spillway.

That was Colonel Hodges' task and he accomplished it in a way that earned him the thanks of Congress, and the appreciative praise of Goethals, who said: "Charged with the solution of the most important engineering problems of the Canal, it can be said of him truthfully that the Canal could not have been built without him." [1] After that, he could afford what a little lady in Ancon wrote about him:

Assistant to Goethals is Hodges,
In a house on a hilltop he lodges,
His morals are nice,
His manners precise,
And humor he carefully dodges.

Concerning another Commissioner and the rivalry between the Atlantic and Pacific Divisions, she composed another limerick:

[1] Bishop, J. B., *The Panama Gateway*, p. 216.

Sighs Sibert: "I've no time to play,
I'm neglecting the Y. M. C. A.
Even bridge is no fun,
Since S. B. Williamson
Jumps the records in concrete each day."

Sydney B. Williamson, who had worked under Goethals on the Tennessee River and the New England coast defenses—and betweenwhiles followed him as a captain of volunteer engineers in the War with Spain—had been put in charge of the construction of Pedro Miguel and Miraflores Locks. Through no fault of his own, he got away to a late start. It had been originally planned to put the lowest two locks on the Pacific side of the Canal at La Boca, near the present port of Balboa. Surveys made by one of Colonel Goethals' predecessors there had apparently found a firm foundation of stiff clay. But as soon as the trains began to run out on the trestles to dump rock for the proposed La Boca Dam, the trestles began to sink in a most alarming manner. Instead of stiff, indurated clay, the stuff was an unctuous pudding that slid like graphite. A better site was found at Miraflores. Incidentally, why the enemies of the Canal kept hammering away at the imaginery dangers of Gatun and totally ignored the real fiasco at La Boca, is a dark mystery.

Once he got under way, Sydney B. Williamson began to make yardage. Instead of cableways and electric trains, he used steam dinkies and chamber-cranes with long cantilever arms; instead of depending on the barge-service from Porto Bello, he took his crushed stone direct from the freight-cars at the end of a short haul from Ancon quarry. As Colonel Goethals pointed out in the letter to the *Engineering Record,* this practice effected a saving for Williamson at the expense of creating a car-shortage for the Panama Railroad. Statistics were hurled back and forth with great vehemence. The war between the Atlantic and Pacific Divisions resembled a battle between two adding-machines. One week the *Canal Record* officially reported that concrete was being laid by the Pacific Division at a cost of one-sixteenth of a cent per cubic yard less than at Gatun.

That spirit of competition did for Uncle Sam what the slave-driver's whip did for Pharaoh at the building of the Pyramids. Each of the twelve locks of the Canal contains as many cubic yards of concrete as Cheops' pyramid does of stone. Even the sober, technical language of the engineers called it Cyclopean, because they hurled in the biggest pieces of rock that a steam-shovel might lift or a flat-car carry. They used miles of old French rails for reinforcing rods.

They built gleaming white walls a thousand feet long, ninety feet high, eighty feet thick at the base, and terraced upward in six-foot steps. Lie, Pennell, Van Ingen and many another painter saw and rejoiced at what Pennell called "The Wonder of Work."

The men who wrought these wonders, from the divisional engineers down to the water-boys, were working against the other crowd's record like players on a team. It was a most important part of the Chief Engineer's duty to keep up this healthful competition while keeping down the seldom-slumbering jealousy between this man and that, between one organization and another. As Arnold said of Sophocles, Goethals was one of those rare men "who saw life steadily and saw it whole." He had that even rarer ability to see things from the other man's point of view. A regular and a West Pointer to his finger tips, he rose above the narrowness of some of his brother officers who resented seeing so important a post as that of divisional engineer given to a civilian. To such critics Goethals replied that Mr. Williamson was as well-trained and able an engineer as could be found, that he was receiving only $10,000 a year for his services as against the $14,000 paid Colonel Sibert and Colonel Gaillard, and that, un-

like the Army officers, he had no pension to look forward to after retiring. In 1913 Mr. Williamson resigned from the Canal service to enter the employment of the English branch of an American contracting firm, with the consent and approval of Colonel Goethals, who took personal charge of the Pacific Division from then until it was abolished.

Writing to Williamson in England, in August, 1913, Goethals observed, sadly: "Poor Gaillard, after his return from leave, went completely to pieces. It is a nervous breakdown. His memory seems to have gone and [Dr.] Deeks doesn't believe he will ever be able to return. He, accompanied by Mrs. Gaillard and Pierre, sailed for the States on another leave, accompanied by [Dr.] Mason. . . ."

An operation by the famous Dr. Cushing revealed that this great engineer and gallant gentleman had been fighting a mortal disease at the same time that he had been fighting the tremendous slides and breaks and upheavals of the Culebra Cut. In honor of his memory, Congress has changed the official title of that part of the Canal to the Gaillard Cut. His breakdown threw an additional burden on the already overloaded shoulders of the Chief Engineer.

"Few men could have stood the amount of work he put on himself," wrote Edgar Young, sometime

crane-man in the Cut, in memory of Colonel Goethals.[1] "Men broke down, men went crazy, men took to drink. The Colonel kept as keen as a brier.

"What man is able to express the spirit that was in him and which he instilled into us? The job ran from ocean to ocean—forty-seven miles. The Culebra Cut was a hell's gorge with the heat and the earth glaciers we were fighting. A nine-mile canyon through the backbone of the mountains. . . . The rains and the sun beat down on us in that gorge. Blacks from the West Indies stoked our roaring machines and with shouting Spaniards struggled and strained in gangs about the machines and along the tracks.

"Culebra Cut brings up a score of memories to an old Canal worker. So do Pedro Miguel, Miraflores, Dump Six, Bas Obispo, Empire, Las Cascadas, Old and New Frijoles, Lion Hill and Tiger Hill, Gatun Dam, Gatun Locks, the old French Canal. We carried on from end to end of the Canal. And the man who knew the details of all the jobs was 'The Colonel.'

". . . Just when it looked as though the long drudgery were nearly finished, the big slide came at Cucaracha in 1913. Many of the engineers were

[1] In his article in the *Washington Sunday Star*, February 5, 1928.

COLONEL GOETHALS ON WEST BANK OF GAILLARD CUT, GOLD HILL AND CUCURACHA SLIDE OPPOSITE

ready to give it all up. Colonel Goethals was summoned hurriedly to the scene of the disaster. Colonel Gaillard was nearly frantic.

" 'What are we ever going to do now?' he asked as Colonel Goethals calmly looked over the scene.

"The Colonel finished lighting a cigarette before he answered.

" 'Hell!' he said. 'Dig it out again.'

"That was his only comment."

"When I left the Isthmus," testifies an old hard-rock man, "Goethals was a strange name to me. In the Cut we never spoke it. We called him 'the white-haired Colonel.' "

His men played a trick on him in December, 1909, when news came of his promotion from lieutenant-colonel to colonel. Greatly to his disgust, the morning south-bound train, on which he was escorting a party of Congressmen, was repeatedly unaccountably delayed. It reached the entrance to the Cut just as the eleven-o'clock whistle blew, followed by the customary firing of the dynamite charges in the loaded drill holes. Shot after shot rang out, at uncommonly regular intervals that made Goethals frown, think, count—and break out smiling. They were firing a salute in his honor.

The twenty-five million cubic yards of extra material brought down into the Cut by the various breaks and slides rendered impossible a picturesque plan of the early days for running the relocated Panama Railroad on a berm, or shelf, on the eastern bank of the Cut, from Gamboa to Pedro Miguel. Instead, it had to be run through broken and difficult country to the eastward of Gold Hill. The flooding of the Chagres Valley to a level of eighty-five feet drowned out the old right of way up the river bank, and made it necessary to carry the new line on high embankments across Gatun Lake. But when rock from the Cut was dumped on these embankments, the ground sank under the load. Investigation proved that the surface stratum of sand and clay, some twenty feet in depth, that had borne the low embankments and light rolling-stock of the 'fifties, was crushed down into the deep underlying mass of decayed vegetal matter between the surface and the bedrock, by the weight of the massive, high-level, twentieth-century roadbed. There was nothing to do but to keep on dumping material and broadening the base of the embankments until they could support themselves at the required height. This, and the many deep cuts through the wrinkled ridges, brought the cost of the relocated Panama Railroad to nine mil-

lion dollars, or a million more than the original line. It was a perfect little gem of a model railroad, when finished, and in Goethals' opinion, well worth its cost for its military value alone. His son, George R. Goethals, after his graduation from West Point with a standing high enough to win him a commission in the Corps of Engineers, was detailed to this work, as were numerous other young army officers. From 1909 until the completion of the task the chief engineer in charge of the relocation of the Panama Railroad was a cavalry officer, Lieutenant Frederick Mears. The Colonel believed that army officers ought to have a practical knowledge of railroading, as a preparation for modern war.

Parenthetically, it is hard to realize, twenty years after, how thorough a railroad job was the building of the Panama Canal. Except what floated on water, practically everything ran on rails. To excavate a few thousand cubic yards, we would lay two lines of broad-gauge track,[1] move up a ninety-five-ton, five-yard bucket, 1905-model Bucyrus, and haul away the spoil on a string of Lidgerwood flats or Oliver dumps. There was not a solitary motor-truck used in the construction of the Panama Canal. Hauling

[1] The original Panama Railroad had a five-foot gauge instead of the standard four feet eight and a half inches. This broad gauge has been retained on the Isthmus ever since.

freight away from the rail was a job for an escort wagon, a popping bull-whip, and four big army mules.

Hauling the spoil from the Cut to the dumps, the men to and from their work, the commissaries and Q.M. supplies to feed and clothe and otherwise satisfy them and their families, the regular local mail and passenger service, and then, on top of that, the commercial freight and intercoastal trade diverted from the Tehuantepec Railroad after the Mexican revolutions began in 1910, all made for plenty of traffic over the hundreds of miles of construction line and the main tracks of the P. R. R. At the peak of the load, in 1912, the total combined train movements on the Isthmus reached 800 a day. It was then that the gray-haired Brotherhood man, waiting for a south-bound at Culebra station, said to me:

"I've been a railroad man for twenty-five years and I've never seen better railroading than what we've got right here on the Isthmus."

Edgar Young, in the article already cited, gives an example of how the Colonel knew every detail of the work and how he could talk to the railroad men in their own language:

"I remember once when a train of empties, coming down into Culebra Cut at Tower R, bumped into

a stalled train. There was an investigation. The engineer said he had applied the emergency and then reversed. The Colonel grinned and asked, shrewdly, 'Why did you reverse after "big-holing" her?' That question pinned two errors on the engineer. The occasion demanded a heavy application of air, sand under the drivers, and the 'big-hole,' or emergency, as she slackened. He sent the offending 'hogger' back to work with a wave of the hand. We got to know that the best way out of trouble was to own up when we were at fault."

But this busy, affable railroad president in baggy civilian clothes had never forgotten the business that had brought him to the Isthmus in the first place. Outwardly, he was no longer the smartly uniformed General Staff officer; inwardly, he was more concerned than ever with battery positions, ranges, and fields of fire. He was ready, and anxious to build the fortifications recommended by a board of army and navy officers headed by Admiral Dewey, and he estimated the cost at $14,000,000. But Chairman Tawney of the Appropriations Committee declared that it would "cost many millions of dollars, probably $50,000,000. . . . Before the country goes into such a vast project it should try to get a neutralization treaty with the other nations. The talk that a neu-

tralization treaty would be disregarded in case of war falls short of the truth." [1]

That was in 1910. Mr. Tawney and a good many other Republicans failed to be reëlected that year and the Democrats obtained control of the House. But their faith in treaties, neutralization, and international law was, if anything, stronger than ever. Much stress was laid on the fact that England had not erected any fortifications on the line of the Suez Canal—ignoring the strong fortresses of Aden at one end of it and Malta at the other, with the British Army of Occupation in Egypt alongside. Four years later, Australian scouts topped the crest of a sand-dune and discovered an Austrian engineer with a detail of Turkish soldiers busily drilling a well for the army advancing behind them to destroy the Suez Canal. . . .

"All I have contended for," said Mr. Tawney in the interview quoted above, "is consultation with the other nations before proceeding to build fortifications. We should at least see how they stand."

Colonel Goethals cut that item out of the *Washington Post* and pasted it neatly into his scrap-book. In the early spring of 1912, he found a rare opportunity to give Mr. Tawney just what he was con-

[1] In the *Washington Post*, December 5, 1910.

tending for. Accompanied by Mrs. Goethals and Tom, who had completed the work for his A.B. and received leave of absence for the second half of his senior year at Harvard, the Colonel made his first and only visit to Europe. He went there to inspect canals and docks, and hugely enjoyed himself at the harbor-side in Hamburg, at the big new locks of the Kiel Canal—which the Germans carefully explained to him were wider than those at Gatun—and the small but perfectly equipped Teltow Canal at Berlin. He wrote to his daughter-in-law (George was married and living in a Type 17 cottage in the Canal Zone) entrancing details of cantilever arms, hatchways, and unloaders which she, as a Canal Zone wife, was supposed to understand perfectly. To George he described the felicity of watching at Potsdam a full-strength battalion of pioneers with full war-equipment executing in peace time exactly the sort of work they would be called on to perform in time of war. As for our army and country, he feared that we would have to take a drubbing before we got some sense knocked into us. Prophecy is no safer for a militarist than a pacifist.

There were some American snobs in Berlin who roused the Colonel's wrath by their persistent efforts to exploit him socially. He described their chief as

"one of the specimens I want to buy when I find my market and organize my syndicate for buying people on my estimate and selling them on their own." Returning to the Hotel Adlon, he was "received with greater deference by the factotums—hats raised—bows greater—but I learned, when I got within, the reason. The Great Mogul advised me that there was an invitation awaiting me, bidding me to breakfast with His Imperial Majesty on March 10th!!! An immediate reply was requested. I am afraid I shocked the factotums by saying I'd phone later, and came up to the room, where I found the invite reading: 'On the all highest order of his Imperial & Royal Majesty, the over-court and house marshal whose name is signed below is honored in inviting the American Colonel, Mr. Goethals, to breakfast-table on 10th of March, 1912, at 1 o'clock, in the Royal Castle at Berlin.' Signed by A. Eulenburg. In one corner is noted, 'Concerning the suit, look on the other side.' On looking is seen: 'Gentlemen—frock-coat—approach from the pleasure garden through Portal 4 under Portal 2—go up the marble steps.' "

Concerning the Kaiser, the Colonel wrote in his next letter: "He reminds me of Roosevelt toned down. He has, of course, a strong personality, but not so strong as Mrs. —— mentioned. He wears

jeweled rings, which I don't like in a man, and he is vain. Another thing I didn't like in him—the Empress entered while we were talking, accompanied by their daughter, a girl about 18. The others ceased talking and stood at attention, but the Emporer paid no attention. . . .

"Lunch was announced. . . . The Emperor is on a diet and eats very little—he kept up such a volley of questions about the Canal—the fortifications, etc., interspersed with his introduction of the steam-shovel at Kiel—that he gave me very little time to eat anything. . . . He drank my health at lunch, hoped he'd see me again, as he was leaving, and wished it were possible for him to visit the Canal. He seemed pretty well posted on what is being done."

Returning to New York, the Colonel told the reporters who interviewed him at the pier that the Kaiser had told him that "the United States should so fortify the Panama Canal as to be able to hold it against all the world." No part of the world was specified as a possible enemy, but by the time the story had been cabled *via* London to Berlin and translated into German, some one had changed it to the extent of having Goethals quote the Kaiser as

warning America to fortify the Canal against attack by Great Britain and Japan.

Naturally, the Kaiser denied ever having said anything so tactless. His Ministers overplayed their hand by having the semi-official *Nord Deutcher Zeitung* deny that the Kaiser had said anything whatever about fortifications at Panama to Colonel Goethals—who was promptly denounced in the German press as a liar and an American swine. The Colonel, who had just finished repeating his original testimony to a Senate committee, kept his temper and stuck to his guns. Most American newspapers moved up eagerly in his support, advising the Kaiser to nominate himself and not the Colonel as a charter member if he were trying to form a German branch of the Ananias Club.

The War and State Departments exchanged official communications on the subject, unofficial copies of which found their way through friendly channels to Culebra. Goethals had the satisfaction of reading what the Secretary of State had cabled to Ambassador Leishman at Berlin:

"It is believed that if the facts and the press reports as published here had been reproduced without distortion in the German newspapers, German opinion could not have perceived in this incident any-

thing justifying hostile comment—which, it may be remarked, is regrettably frequent in regard to American affairs in certain sections of the press in Germany. The American Government greatly regrets such feelings as may have been aroused by distorted versions of what actually occurred; and this regret is shared by Colonel Goethals, whose discretion is equal to his standing in his profession."

Writing directly to Ambassador Leishman, Goethals said: "As I explained to you, prior to my leaving the United States the Democratic members of the House of Representatives were disposed to question our right to fortify the Canal without securing the consent of foreign powers, and it was the expressed intention of some of the leaders to make no further appropriations for the fortification of the Canal on the ground that we had agreed to maintain its neutrality, which necessitated our first ascertaining whether a treaty of neutrality with the maritime powers of the world could not be secured. Under these circumstances, I did not hesitate, after my return, to express to the committees the concurrence of the Emperor in my ideas concerning fortifications, since I realized the weight that such an opinion would have, and I also understood that it would put a quietus to the question of our rights in the matter.

I understand (though I have seen none of the press dispatches to this effect) that I have been quoted as stating that the Emperor advised fortifications against England and Japan. This is entirely erroneous. I did not mention either the English or the Japanese in any conversation with any member of Congress or with anyone else, merely stating that in my conversation with the Emperor upon the subject of fortifications he concurred in the opinion expressed by me that they should not be limited to seacoast batteries, but should include land defenses for the locks and dams and that a permanent garrison should be provided for. I further stated that the Emperor rather favored a larger permanent garrison than our officials had proposed.

"These statements to the House Committee and the Senate Committee resulted in the disappearance of all criticism of the policy of fortifications and a promise on the part of the Committee on Appropriations of the House to give us money, not only for the seacoast batteries, but for the land defenses, and in addition to make provision for quarters for a permanent garrison.

"Under the circumstances that existed, and with the results accomplished, I feel no compunctions in having expressed the views of the Emperor upon the

subject. My only regret, as previously stated, is that you may have been placed in some embarrassment. I sincerely trust that such is not the case and that the press dispatches had no basis in fact."

Having obtained the promised appropriations, he proceeded to construct the fortifications. To the Colonel's great displeasure, the location and armament of every fort and battery were made public in the printed report of the testimony given by Major-General Leonard Wood, Chief of Staff, and various other officers in hearings before a subcommittee of the Committee on Appropriations, in January, 1913. There anyone may read of the sixteen-inch gun on Perico Island, the fourteen- and six-inch rifles on Naos, and the twelve-inch mortars on Flamenco Island, in the Bay of Panama, the guns of Fort Amador, guarding Balboa, and the batteries of Fort Sherman, Fort Randolph, and Fort de Lesseps defending the Caribbean entrance. Additional heavy guns have been mounted since the World War. Without these forts to keep it at a respectful distance, a blockading squadron would have our fleet at its mercy as it came down the narrow channel in line ahead, or it might bombard the locks at Miraflores or Gatun. But Gallipoli proved over again the

axiom that an old fort can sink a new battleship but even a new battleship cannot sink an old fort. It is very unlikely that any admiral will ever risk his fleet in a direct attack on the coast-defenses at either end of the Canal.

To meet any force that might land at some point up or down the coast, to march round and take the forts in the rear, a permanent garrison is kept stationed in the Zone. By Goethals' advice, the country on either side of the Canal has been kept out of cultivation and allowed to remain or relapse into thickest jungle, through which no landing party, encumbered with guns and transport, could move as fast as our men could be transferred by road, rail, or water to intercept them. Field-works have been built to defend the locks against an attack in force; electric flood-lights and sentries guard the lock gates against sabotage. Twenty years and more ago, our army engineers foresaw the possibilities of air-raids, and placed the operating machinery of the gates and sluices deep down in the massive concrete lock-walls. Today our planes swing back and forth overhead, while the submarines make frequent submerged and surface runs through the waters on either side of the Canal, from their base at Coco Solo. It was Goethals'

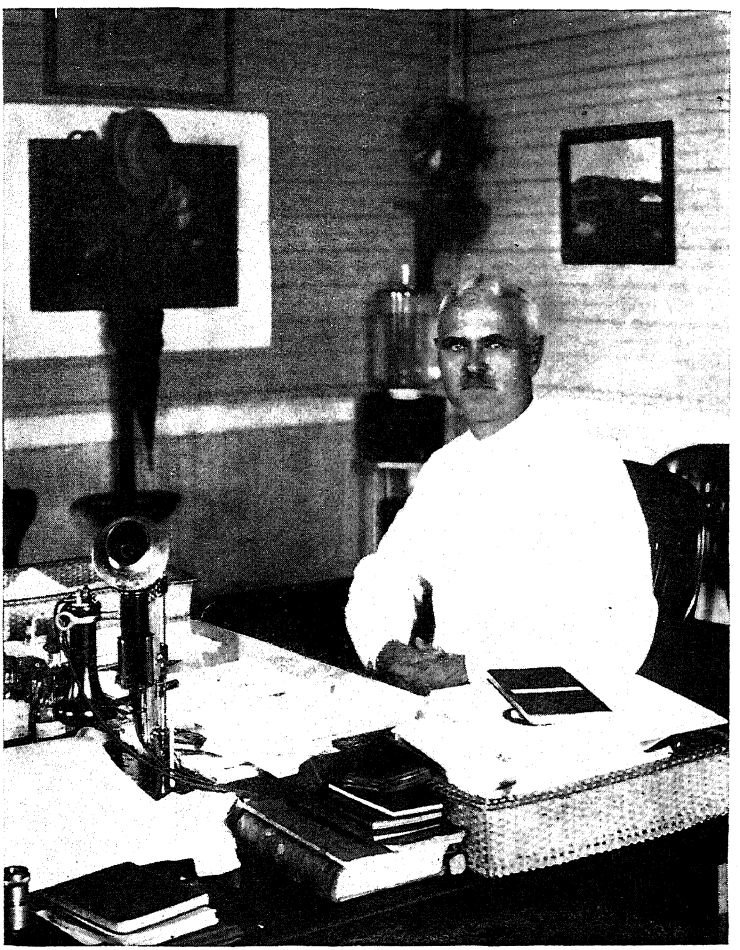
idea that one submarine base at the Isthmus would be better than two, because it would insure local knowledge of both approaches to the Canal by the senior officer present, in case of emergency.

It is a melancholy business that we should deliberately let our frontier grow up into forest, in order to keep our neighbors at a distance, like the German barbarians mentioned by Tacitus two thousand years ago. Some day we may be able to take the big guns from Sandy Hook and the Golden Gate, sell the navy for old iron, and turn the army into a constabulary. Then will be soon enough to dismantle the forts at Panama. To Goethals the Canal was primarily military, but he built and equipped it to give the utmost possible service in both war and peace.

At Hamburg, he greatly admired the way the Germans had turned a marshy foreshore and muddy shallows into a deep-water, model port. In Berlin, he frankly envied the spacious, tree-lined boulevards, "wider than Pennsylvania Avenue." At Balboa, the Pacific terminus of the Canal, he found a miserable Central American village overlooking mud-flats where most of the water ran off at low tide, exposing the sprawling hulks where the French dredging fleet lay like a defeated and scuttled squadron. Those

worth repairing were raised and set to helping the big new *Corozal* and her consorts deepen the channel. Suction dredges sucked up the mud outside the new concrete seawall and squirted it inside, scooping out an anchorage basin to float a fleet and making dry land to support a city. Millions of tons of earth and rock from the Cut were dumped on the tidal swamps and the breakwater running out to Naos and Perico Islands. On the hundreds of acres of land thus reclaimed Goethals built his model port, with concrete docks and warehouses, a dry-dock big enough to hold any ship that can squeeze through the Canal, the machine-shops and forges transferred from Gorgona when the rising waters of Gatun Lake were beginning to threaten the repair-pits, a coal depot where half a million tons are kept on hand, and both public and private tanks and pipe lines for fuel oil. The cold-storage plant, stores, and laundry maintained by the Canal commissary during the construction period now serve the operating force and the shipping passing through. All these facilities help trade, earn Uncle Sam a good profit in time of peace, and served our warships and transports well in the World War.

On Balboa Plain and Balboa Heights Goethals



COLONEL GOETHALS AT HIS DESK IN CULEBRA, HEADQUARTERS OF THE ISTHMIAN CANAL COMMISSION

built a proud little city, with streets of more than German spaciousness and houses of the style Spain learned from Rome. Ultra modern in its massive concrete construction and electric equipment, it harmonizes, nevertheless, with its neighbor, that earlier model city, moated and walled and bastioned, that was laid out by an earlier military engineer, Don Fernando Saavedra of Castile, after Morgan the Buccaneer had sacked and burned old Panama. Now as then, the rains are mellowing the staring white walls and raw new arcades, the moss creeps over the scarlet tiles, the palms are growing taller in the Prado and the Plaza. Balboa is blending into its background as imperceptibly as the green slope of Gatun Dam joins the green slope of the hillside. Like the whole Canal, the new Pacific port is good engineering, good craftsmanship, good art. Its name, which was first suggested by Don Federico Alfonzo Pezet, Peruvian Minister to Panama, is the fittest that could have been bestowed. It brings together the past and present of Panama, like the echo of Keats in President Lowell's words when, on Commencement Day in 1912, he announced the name of the man on whom Harvard University was bestowing the degree of Doctor of Laws:

"George Washington Goethals, a soldier who has

set a standard for civic works, an administrator who is maintaining order and security among the multitude of workmen in the tropics, an engineer who is completing the vast design of uniting two oceans through a peak in Darien."

CHAPTER XII

THE BENEVOLENT DESPOT

DOWN on the Isthmus the sun rose close to six o'clock every day in the year. So did the Colonel, except on Sundays. Every week day, he sat down to breakfast at half past six. Benoit, the butler, would bring him one of the small, tart, native oranges, peeled and stuck on a fork. (That is the best way to eat one of those things, for its center is a solid mass of pips.) Two eggs, a bit of bacon, and a cup of coffee completed the meal. The Colonel was fond of cereal, but never ate it on the Isthmus, for he could not abide "tinned cow."

He would walk down the hill and be at the station in time for either No. 2, northbound, due at Culebra at 7.10, or No. 3, southbound, at 7.19. The engineer would be on the watch, and if he saw the Colonel swing aboard, then, when the train pulled out, the "hogger" would be sitting in the cab window with his right hand cupped to his chin—a gesture known to every American railroad man. It represents a beard,

the symbol of age and authority, and conveys the fraternal warning, "Look out for the Old Man!"

But frequently, instead of taking either train, the Colonel would leave shortly ahead of it in his motor-car, a big, comfortable limousine running on flanged wheels, with a pilot under the radiator and a colored flagman sitting beside the chauffeur. The thing looked like the nightmare offspring of a passenger engine and a taxi. Because it was painted the regulation bilious yellow of a P. R. R. day coach, its nickname was obvious. You could scare a shirker out of a wet season's growth by shouting, "Here comes the Yellow Peril!"

But as likely as not, when it came along, the motor-car would be running empty, to pick the Colonel up somewhere for a short haul between inspection points, and finally, to bring him home. If inspecting the Pacific or Central Division, he would usually return home for a twelve-thirty lunch. If over on the Atlantic side, he would eat at Gatun or elsewhere, and be back at Culebra about two or three. When he had lunch at home, he would take a siesta of half an hour, immediately after eating. Then he would work in the office until half past five. Dinner was at seven. Usually the Colonel would excuse himself to his guests, if there were any, and return to

his desk for an evening session that lasted until ten o'clock. By ten thirty he would be in bed.

Only by holding to this iron schedule could Goethals keep himself from being buried under a landslide of accumulating work. He played neither bridge nor golf. He explained to visiting newspaper men that one needed a little daily exercise to keep healthy in the tropics, invited them to go with him on inspection, and then walked them to a pulp as these younger men tried to keep up with him through the Cut. One correspondent declared fervidly that if that was the price of health, he preferred to die.

Social engagements the Colonel regarded as so much lost motion. He avoided them with great skill. Too many distinguished visitors came to the Isthmus during the last years of the construction period. Some, as the Colonel expressed it, were too high-ranking to be dodged. He entertained more often than he went out. He dined infrequently at the houses of a small group of intimate friends: the Gaillards, Hodges, Rousseaus and Williamsons at Culebra, Joseph Bucklin Bishop at Ancon, Majors Chester Harding and James P. Jervey at Gatun. Among those who habitually dropped in at the Goethals' house in Culebra were Dr. Deeks of Ancon Hospital, Father Collins, the Roman Catholic priest

of Culebra Parish, and Mike Mitchell, the famous Zone character who operated the Panama Railroad relocation mess at Monte Lirio. Whenever the family were away and the Colonel alone on Thanksgiving Day, Mike Mitchell would be his one and only invited guest for the turkey dinner.

He had much entertaining to do, especially of people who were sent down with letters of introduction from the President or the Secretary of War. Then there were distinguished foreigners, like Lord Bryce, General Sir Ian Hamilton, and M. Jusserand. These were usually house guests, as were always the President and the Secretary of War, whenever they came down.

Whenever Congressional Committees descended on him, the Colonel would invariably leave home and go into Ancon, to live at the Tivoli, where the Congressmen stayed, so as to be available at any time. One of their visits would always use him up more than any phase of the job itself. They were a mixed lot. Some of them were courteous, intelligent gentlemen, some were amusing ignoramuses,[1] and some

[1] One Representative of this type, who had been seasick most of the way down, saw "P.R.R." on the Panama Railroad box-cars at the wharf and said: "I'd never have come this way if I'd known there was a Pennsylvania Railroad Station so handy." Another, on being told that the tide rises and falls more than twenty feet at the Pacific end of the Canal and less than two feet at the Atlantic, asked, "How many times a day does this occur?"

took unsavory advantage of their immunity from arrest.

"Do you know what we call *them*, sir?" said a Zone policeman, disgustedly. "We call them 'The Savages'."

Once a party of Congressmen, staying at the Tivoli, were late for the special train waiting for them at the depot in Panama City. Only the Colonel and a few of the party were aboard. At the scheduled time for departure he turned to the conductor and ordered, "Give her the bell!"

"Just a minute, sir," said the conductor, pointing. "Here come some more."

"Give—her—the—bell!"

The special rolled out with only part of its load. Indignant Representatives, overtaking him hours later, took one look at the grim expression on Goethals' face and swallowed their wrath in silence. He handled them, but anything else was pleasanter and less exhausting.

When it came to entertaining house guests, Colonel and Mrs. Goethals derived priceless assistance and endless joy from that strange heritage from the days of Lesseps, Benoit, the butler. He looked fierce enough to frighten a buccaneer and was eccentric to the verge of insanity. He considered him-

self bound to stay in the Chief Engineer's house at Culebra and serve whoever came to live there. The first time that President Taft was Colonel Goethals' guest on the Isthmus, the President asked Benoit how long he had been there.

"I have worked for four French chief engineers and, so far, three Americans," replied Benoit.

It is just as well for Mr. Taft's peace of mind that he did not ask Benoit what he meant to do after the Canal was built, for to that question the Frenchman always replied, "I am going to Jerusalem to see the Resurrection."

Benoit had a pet, a huge, villainous macaw named Garibaldi. His wings were clipped, and he went walking about the premises like a man on snowshoes. Benoit would throw him a half-inch stick of kindling, which Garibaldi would set on end, hold steady with one claw, and split in twain with one tweak of his mighty bill. He was on the point of biting the head off Tonto, the Gaillards' monkey next door, when Colonel Gaillard intervened, remonstrating in his softest Carolina tones: "Ga'abaldi, yo' mustn't act rough with Tonto thataway." Garibaldi took to strolling about Culebra after dark. If anybody bumped into him he would let out a blood-curdling yell, swarm up the offender's trousers leg like a pirate

boarding a galleon, perch on his shoulder, and snap that fearsome beak of his as close to the man's ear as he could come without actually snipping it off. Complaint was made to the Colonel, who told Benoit that he must keep Garibaldi from becoming a public menace. Benoit's response was to wring Garibaldi's neck and serve him up, beak and all, to the horrified family for dinner.

In spite of his eccentricities, Benoit was the hardest-working and most efficient of servants. With all the entertaining that took place in that house over a period of eight years, the establishment was run solely by Benoit and a faithful colored Virginia cook named Annie. She died soon after the Canal was built. Benoit took a job in charge of bachelor quarters in Balboa, after headquarters was moved there from Culebra. It is not known whether or not he is still living. Perhaps he has gone to Jerusalem to see the Resurrection.

On Sunday mornings breakfast would be served an hour later. On Sunday afternoons Goethals always took a long siesta and stayed home for the rest of the afternoon and the evening. Those were the only hours he took for himself. As for vacations, in all the nine years he spent in the Canal Zone, he went North just once, except on official business, and that

was during the month of June, 1916, when Tom graduated from the Harvard Medical School. Even the trip to Germany in 1912, while affording a welcome contrast, was undertaken at the suggestion of President Taft, for the purpose of inspecting German canal and port equipment and facilities. In August, 1915, the Colonel went up to visit the Panama-Pacific Exposition at San Francisco, not expecting to return to the Isthmus—but the Cucaracha Slide promptly did its worst, causing Goethals to withdraw his resignation, then in the hands of the Secretary of War, and hasten back to the Isthmus, to remain there until December, 1916. One vacation in nine years—and only a half-holiday on Sundays.

On Sunday morning, when the other Canal men were lying late abed, reading magazines at the club, hunting, fishing, going to morning service, watching the drawing of the national lottery on the balcony of the episcopal palace overlooking the Cathedral Plaza, going to the bull-fight, cock-fights, baseball game, or Taboga, the Colonel would be putting in his hardest work, from eight to one, in the old Administration Building at Culebra.

That ugly, barn-like frame structure used to be the heart and nerve center of the whole Canal or-

ganization. When it was being torn down in 1927, after serving as barracks for Porto Rican infantry stationed in the Canal Zone during the World War, the brigadier commanding Camp Gaillard happened by and discovered that this had been the headquarters of Colonel Goethals during the construction of the Canal. Having been one of Goethals' pupils at West Point in the 'eighties, this officer, now Major-General Charles Dudley Rhodes, wrote to his old instructor, but received no answer until nearly a year had passed. Then, after General Goethals' death, his private secretary discovered among his papers and mailed to General Rhodes the penciled draft of this letter in Goethals' own handwriting:

"I am indeed sorry to learn of the passing of the old Culebra Administration Building. While I occupied the new one at Balboa for a time, it was about the old one at Culebra that the memories cling. It was there that at first the immensity of the job struck me so forcibly that when I took hold I feared it was going to prove too much.

"And then gradually this phase was replaced by the realization that it was not at all big, but only a mass of irritating details. So that the building became an 'old mill' grinding out these details from day to day, enabling the big thing to take final shape.

"It was there that I came so closely in contact with the rank and file; obtaining that control of the force —molding, directing and guiding it so as to secure results. That became the big, attractive thing of the job.

"Well, it was a great old job, and the old barn-like building the center of the universe!"

Dramatic scenes were enacted in the chairman's office in the "old barn-like building." The most exciting moment was in February, 1911. One dark night in August, 1910, a Panama Railroad engineer whom we may call Jones heard two torpedoes explode under the wheels of his locomotive, but, instead of stopping, kept on and crashed into the rear of a freight train, killing the conductor. Jones was found guilty of involuntary manslaughter by the Supreme Court of the Canal Zone, and was sentenced to one year in the penitentiary. At a somewhat excited mass-meeting of engineers and trainmen, it was resolved that unless Jones was released immediately they would resign and return to the United States, where they could "enjoy the protection of the Constitution, a jury trial, tranquillity and the pursuit of happiness."

Colonel Goethals was then on his way back from a visit to Washington, and the acting chairman per-

suaded the men to postpone action until he reached the Isthmus. He arrived on a Thursday, and unless Jones was released by six o'clock Friday afternoon the men were to walk out Saturday morning. About half past seven Friday evening a member of the committee called the Colonel up on the telephone and asked for his decision. He got it.

"Call up the penitentiary and they'll tell you my decision. Jones is still there; and every man that fails to report at seven tomorrow morning goes out of the service."

There was no walk-out Saturday morning. Only one man failed to report for duty, and he sent a doctor's certificate. At a ball game the next week, the man who had telephoned came up to bat, and a voice from the bleachers yelled: "Hello, Bill! *You* here? Thought you and the rest were going up North to live under the Con-sti-too-tion!"

Bill struck out.

Did the free-born American citizens in the Canal Zone actually "enjoy" this stern military despotism more than "the protection of the Constitution, a jury trial, tranquillity, and the pursuit of happiness"? They certainly behaved as if they did on a certain occasion when the President came to the Isthmus and the Colonel stepped forward, as chairman of the

mass-meeting that had been called in the President's honor, to introduce him. A large majority of the five or six thousand American employees had crowded into the old machine-shop that had been cleared and decorated for the meeting, and, at the sight of that familiar white figure standing at the edge of the platform, they exploded like a stampeded national convention. It was fully five minutes before the cheering stopped and the Colonel was able to introduce the speaker of the evening.

The Panamanians, well used to military despots in the past, simply ignored the American minister and the dummy governorship of the head of the Department of Civil Administration.[1] To their logical Latin minds, El Coronel was El Gobernador, and in time of stress they went straight to him. One presidential year, delegations from both political parties in the Republic came out to Culebra to warn Goethals that the wicked men on the other side were plotting riot and revolution. Their political traditions were well defined by the head of the Liberal Party, who frankly declared in 1907: "Before the Americans came, it was not the man with the most

[1] Colonel Tom Cooke once defined the duties of that official as attending Commission meetings, signing cab licenses, and drawing fourteen thousand a year.

votes who won the election. Oh no! It was the man with the most rifles and machetes."

The Colonel heard both sides, smiled paternally, and observed: "Well, if it comes to *that*, you know we have a regiment here!"

"No! No! No! Señor Gobernador, it will not come to that!"

Perhaps they caught the same expression in Goethals' voice that the artist saw in his eyes when he posed for the picture of the dramatic ending of the war in Porto Rico—the resentment of an always frustrated desire. They came to babble about fighting to him—the disappointed old soldier who had never seen active service. The most absolute despot in the world, he could command the removal of a mountain from the landscape, or of a man from his dominions, or of a salt-cellar from that man's table. As an engineer, he could earn a millionaire's income whenever he chose to go into private employ. As a judge, he was being spoken of with Solomon and Daniel and Haroun al Raschid. Universities were embarrassing him with honorary degrees, and an emperor had asked him to lunch. Distinguished foreign visitors kept assuring him that in their countries such work as his would be rewarded by a title of nobility and high rank in the army. Even the

praise-grudging American admitted that "about the only thing you can say against that man Goethals is that he is handing down a mighty tough name for posterity to pronounce." [1] Success and fame and power were his—and yet, when the native politicians had gone and the Colonel was discussing with one of his assistants the remote possibility of a revolutionary outbreak in Panama City, he sighed wistfully and said: "The Tenth Infantry would be sent in to put it down—and I couldn't march in at the head of them."

No amount of success as an engineer and administrator could quite compensate this true West Pointer for the loss of his own chosen trade of war. Though he had under him an army of forty thousand men, with all the efficiency of the German army and none of its stiffness, and a love for their leader like that of the Old Guard for the Little Corporal, still he could not help envying the youngest shavetail who ever led a half-company in pursuit of a gang of Moro outlaws. He realized that building the Panama Canal was better work for a man of his brain-power than endlessly barking: "Squads right! Squads left!" on a dusty parade-ground, or doing

[1] It is pronounced Gō'thals, with a long o and the accent on the first syllable.

daredevil police-work in Mindanao. He knew that he was changing the whole map of the world; a change that promises to be far more permanent and profound than any brought about by a mere conqueror. And yet the Colonel could not keep down that boyish feeling of discontent because, while his classmates and a whole generation of younger men, to say nothing of untrained civilians like Wood and Funston and Roosevelt, had had their chances to lead charges and win hard-fought actions, he had been a mere peace soldier—a mud-digger.

The place to see the Colonel at his best was from a certain chair in his private office at Culebra, after eight on Sunday morning. There, at a flat-topped desk, with a freshly-opened tin of cigarettes before him, he sat in most informal state, and every man or woman who had a grievance could come and state it to the Man at the Top. From his decision there was no appeal, except to the President of the United States.

In the outer office the complainants are seating themselves on the benches, in the order of their arrival. The first to arrive is a coal-black, primitive-looking, Jamaican pick-and-shovel man, the second is his wife, the third is a five-thousand-dollar-a-year American engineer. The rule is absolute: first come,

first served. Bill May passes swiftly along the line, asking, "Name and check number? Name and check number?" Out of the files comes each complainant's typewritten service record—a record as minutely complete as any French police *dossier*—for Bill May to place on the Colonel's desk in advance of the interview.

Once when the Colonel was up in the States, Bill May wrote him that "Even the Sunday complainants have deserted us as if there were a plague. On last Sunday, one lady called and asked for Colonel Goethals, but consented to see Colonel Hodges. One other white employee came, whom I disposed of. The number of the sons of Ham was also reduced to about ten. I am convinced, in view of the horde the preceding Sunday, that curiosity to see you and say they have had 'a talk with the Colonel' must be largely responsible for the visits. Else they have faith only in your judgment and kindness of heart, or, as you remarked, we are damned unpopular."

The Jamaican and his wife are admitted. They are trembling with embarrassment, and sweating like work-horses. The man stutters so that his dialect—always somewhat difficult for an American to understand—slurs into gibberish. But back of it all there is a genuine complaint of injustice. Patiently, for min-

ute after minute, the Colonel listens, until he has unraveled the whole tangled story of a complicated bit of petty extortion, in connection with the West Indian mess and married quarters. Is that it? . . . Yes, sah! . . . He will look into it. The two bow themselves out, radiant with satisfaction.

The American engineer is greeted by the Colonel as a personal friend. What's the trouble, Jim? . . . Well, it's this way. The commissary bakes regular American bakery bread—good stuff, but a man with stomach trouble like mine just can't digest it. The Ancon Hospital kitchen has been baking French bread, and a few of us in Ancon have been buying it—but now there's an order gone out that nobody outside the hospital can have it any more.

The Colonel shakes his head decisively.

"Sorry, Jim, but I can't allow special privilege. Too many people wanted that bread, and if they all can't have it, I'm not going to make any exceptions. You'll have to buy your French bread in Panama—or get an order from the Sanitary Department."

The next to enter are a group of ecclesiastics, to urge the appointment of one of their number as priest of the Catholic chapel in one of the Zone communities. The present incumbent, an Italian, is becoming so old and infirm that he is often unable to

officiate. At such times the superior of his Order, in Panama City, has been sending as substitute a Spanish priest who, of course, can conduct the services but cannot preach, as the Italian could, in English. The congregation is composed of Americans, as are the Colonel's visitors. These people, they urge, should have an American priest.

On the face of it, the proposition is fair. But the Colonel, as usual, knows the whole inside story. There was no trim little government chapel there to begin with, but there was a morgue—a loathesome, stinking death-house, where the plucky old Italian priest, holding a perfume-soaked handkerchief before his face, used to conduct the service for the dead. It was an American agnostic who exposed this scandal. The Colonel ordered a mortuary chapel to be built immediately, and the agnostic used to turn in the saddle to look at it and chuckle with satisfaction every time he rode by. Because there was already a Protestant chapel near at hand, the other became the Catholic chapel for the town. Now these American priests of a rival Order want one of their own number installed there in place of the devoted old Italian.

"Why didn't you Americans go there in the first place?" asks the Colonel, coldly.

That question is something of a poser. Before his

visitors can think of anything to say, the Colonel solves the problem. He picks up the telephone, gives a number, speaks briefly, and hangs up with a smile.

"Gentlemen, Father Collins, the priest of this parish, will substitute at —— Chapel hereafter, whenever the incumbent chaplain is unable to officiate. He will give this extra service without extra compensation. I am sure you will agree with me that no one on the Isthmus can preach a better sermon than Father Collins."

The Colonel and Father Collins were old friends. The Colonel, incidentally, was a Protestant, and whenever his Sunday-morning court adjourned in time he would attend the eleven-o'clock service at Culebra Protestant chapel. His dispute with the Y. M. C. A., in the matter of keeping the Commission club-houses fully open on Sunday, is the best possible illustration of his religious convictions.

The management of the Commission club-houses had been placed at the outset under the Y. M. C. A. of the United States because that institution had a trained and experienced force for the work. Under the rules of the association no games of any kind were permitted in the club-houses on Sunday, although the club-houses were open on that day. The result of this was that many employees did not become

members of the clubs because, Sunday being their only holiday, they wished to enjoy themselves as much as possible. Colonel Goethals was an earnest advocate of full privileges on Sundays, but he was opposed by the national committee of the Y. M. C. A. in the United States, who threatened to withdraw their workers on the Isthmus if such privileges were granted. A visiting member of the national committee, in discussing the subject with the Colonel, said: "Now, Colonel, how many employees do you estimate go, as you say, into objectionable places in the cities of Panama and Colon on Sundays because they cannot play billiards, pool, bowling, and other games in the club-houses on that day?"

"The answer to your question," said the Colonel, "which every member of a Christian church who believes in its tenets must make, is, that if, by keeping *all* the club-houses open fully on Sunday, *one* man could be kept away from those places, the opening would be justified."

In quick succession the complainants and petitioners pass through. A Colon banker wants the privilege of handling ships' drafts for Canal tolls, and is referred to the Treasury Department. An engineer's wife wants a "Type 17" house in Corozal because the baby cannot stand a flat. Couldn't the Colonel

see the district quartermaster about it, before they go up on leave, Thursday? The Colonel promises. If the Spanish War Veterans get free transportation on the special train, Memorial Day, are the Kangaroos, who are employees, to be crowded out by the Tenth Infantry, who are not? Let a committee of all the fraternal orders appear next Sunday to talk it over. When a man has been brought down from the States as a locomotive hostler, but has got a run the day he hit the Isthmus, why hasn't he drawn an engineer's pay for the first month? He shall get it, if the records of the division office bear him out. A man's brother has been terribly injured in an accident on the relocation of the Panama Railroad, but has been told that he cannot sue for damages because that work is being done by the Isthmian Canal Commission, which is the United States government. . . . The Colonel will report favorably on it if their Congressman will introduce a special bill—the only remedy. The best nurse in Colon Hospital has resigned after a tiff with the head nurse, and the doctors want her back. Can the Colonel get her to apologize for the sake of discipline? He'll try.

No matter how sudden the change of subject, the Colonel always seems to know the rules of a man's division, or shop, or union, by heart. He never has to

look them up in a pamphlet, though the touch of a button will bring it, together with the written record of any man in the service. And almost invariably he winds up the interview with a good, hearty laugh, in which the visitor joins. Even the little gray-haired woman who begged for protection from a drunken husband, "He knows he mustn't hurt me, Colonel, since you wrote him that letter, but he's got into a fuss with another woman now," ceased sobbing and went out almost smiling when the Colonel said, "I'll speak to him."

For that office is famous also for interviews of the other kind, that do not end in laughter.

The last visitor of the morning is Big Bill Morrison, the Socialist blacksmith from Gorgona, and he comes, not with a kick, but with an invitation. The boys in the shops are going to give a banquet to celebrate the breaking up of the old camp, and they want the Colonel to be there.

"Can I get such a breakfast next morning as I had at Mrs. Morrison's in 1907? That was the best I ever had on the Isthmus."

"Sure!"

"Then I'll come."

He passes over the cigarettes and the two sit down

as amicably as if there were not a shoulder-strap nor a red flag in the world.

"Colonel, did you see much of Socialism when you were in Germany?"

"The Kaiser told me that he was going to stamp it all out."

"Bismarck tried that, you know."

"Now look here, Morrison, you mustn't say we have Socialism down here. Introduce the franchise and we'd go to pieces. It's a despotism; and that's the best form of government."

"It is," agrees the big Socialist with a laugh, "if you've got a good despot."

The last visitor is gone and Colonel Goethals tilts wearily back in his desk chair. The cigarette-box is empty; for the last three hours he has been nervously lighting cigarettes and throwing them away half-smoked. There are very many wrinkles in his face, and the white curls are growing thin about his temples, but his smile is still patient and unwearied. Looking over his spectacles at the interviewer in the corner, the Colonel says:

"Do you know, sometimes this gets to be a damned old grind?"

CHAPTER XIII

THE END OF THE BIG JOB

WATER was first turned into the Gatun Locks on September 26, 1913. Special trains were run, and the Canal men with their families turned out by thousands to line the lock walls and watch the muddy fountains spurt up out of the round openings in the dusty floors of the lock chamber. With the water came hundreds of big bull-frogs, washed down through the sluices from the lake above, who swam round and round in comic bewilderment as the water-line rose higher and higher. When the water in the lowest lock was even with the surface of the sea-level canal outside, the mighty guard gates and sea gates split apart and wheeled slowly back through the swirling waters into their niches in the walls.

Colonel Harry F. Hodges, his face radiant with triumph, exulted upon the wall.

"One minute forty-eight seconds—complete operation—twelve seconds less than contract time! *Exactly* as when we swung them in the dry, last May!"

"How are the rising-stem valves working, Colonel? How about the bull-wheels?"

"Perfectly, perfectly! Everything's working just as we planned!"

It was a great day for Colonel Hodges. It was a great day for Mr. Edward Schildhauer, the electrical and mechanical engineer for the Commission, and the inventor of the bull-wheel—that huge, slowly revolving horizontal disk inside the lock wall, with its pivoted arm that was opening the colossal gate as a man might open his bedroom door. It was a great day for Colonel Sibert, bowing right and left on the foredeck of the tug *Gatun* as, with whistle blowing and flags flying, she steamed into the lock under her own power—for the electric towing-locomotives were not yet ready for service. It was a great day for us all and we made the most of the simple celebration. Only the Colonel stood back and let his subordinates enjoy their hard-won triumph. Goethals was not a passenger on the tug, but walked up and down the lock wall, receiving reports on how the valves and bull-wheels were working, and watching the *Gatun* as she was locked through to the lake.

Every snapshot taken of him that day shows everyone in the group about him looking straight at the Colonel, who is looking away from them and away

from the camera at something that is going on outside the picture. Always his mind was on the work, and not on himself.

Two weeks later, on October 10th, President Wilson depressed a lever in the White House and started an electric impulse which was relayed southward from cable station to cable station until it reached and exploded eight tons of dynamite, blowing up the Gamboa Dike and admitting the water of Gatun Lake into Culebra Cut. The Cut had already been partially flooded, that the inrush of water might not be too severe. The Colonel adroitly baffled the movie men, and when the special correspondents ran him down and asked for a statement, he smiled, shook his head, and kept on talking to Peter Rousseau, aged four, about the kind of a toy boat you can make out of one rubber band, two wire nails and three pieces of cigar-box wood.

But though the last man-made dike had been broken, the Cut was still closed to navigation by a great natural barrier. This was our old enemy the Cucaracha Slide, which had slid down and almost completely blocked the bottom of the Cut in January, 1913. So little impression had the steam-shovels been able to make on it during the next nine months that the Colonel decided to take up the construction

tracks, turn in the water, and finish the job with floating dredges.

It was hard to realize that the tracks were up and the shovels gone, that the roaring crowded Cut was silent and empty. A little distance away, we could not help feeling that surely the shovels must still be working, the trains still running, as they had for so many years. It was like the morning after the Armistice.

"Things are not as they were," the Colonel wrote to L. K. Rourke, who as assistant division engineer had organized the work in the Cut and supervised it until he resigned in June, 1910, to become Superintendent of Streets in Boston. "The breaking up of the construction force is about the hardest job that I have now to do."

That job was made no easier by the dilatory tactics of those in authority at Washington. In October, 1913, Secretary of War Garrison came down to the Isthmus, stayed at the Colonel's house, and talked pleasantly to his host about the way everyone in the United States was praising him for staying to finish the Canal—as though the chief reason for Goethals' remaining were sentimental. The Colonel replied, bluntly, that he didn't want to stay, anyhow, but that they must prepare at once for the change from

construction to operation, and that he foresaw more difficulty for whoever might be in his place unless the President took action under the Panama Canal Act of 1912.

That law, enacted August 24, 1912, authorized the President to discontinue by executive order the Isthmian Canal Commission when in his judgment the construction of the Canal had advanced sufficiently to render a continuance of its services unnecessary, and thereafter to "complete, govern, and operate the Panama Canal and govern the Canal Zone or cause them to be completed, governed and operated, through a Governor of the Panama Canal. . . ."

Mr. Garrison was impressed. He consulted with one of the shrewdest and best informed men on the Isthmus, Judge Frank Feuille, who helped convince him that the Colonel was right. At the Secretary's request, Judge Feuille drew up a memorandum setting forth the reasons for Goethals' immediate appointment as Governor. Secretary Garrison indorsed this and sent it to President Wilson.

Judge Feuille is the authority for the statement that Secretary Garrison asked Goethals, by cable from Washington, whether he would remain for at least two years as Governor of the Panama Canal

if President Wilson appointed him to that post. Referring to the President as "my chief," Goethals told Feuille that he had answered that he would remain for as long as the President ordered him to stay.

The Isthmian Canal Commission was abolished by an executive order signed January 27, effective April 1, 1914. On January 29, President Wilson nominated Colonel Goethals the first Governor of the Panama Canal. This appointment was speedily and unanimously confirmed by the Senate. Satirists pointed out that as Chairman and Chief Engineer of the Isthmian Canal Commission, Colonel Goethals had been receiving $15,000 a year, while as Governor of the Panama Canal he would be paid only $10,000.

"They say republics are ongrateful," said Mr. Dooley, "but look, will ye, what they've done f'r that fellow that chopped the continent in two at Pannyma. He's a hero, I grant ye, although I'm sorry f'r it, because I can't pronounce his name. . . . What is he goin' to git? says ye? Why, Hinnissy, th' Governmint has already app'inted him Governor iv th' Canal at a greatly rejooced salary."

In the same article,[1] Mr. Dooley gave his own interpretation of New York's urgent invitation to

[1] Dunne, P. F., "Mr. Dooley Discusses Col. Goethals and the Police." *New York Times*, Sunday, February 15, 1914, v. 5.

Goethals to become its Police Commissioner: "An office imperishybly linked, or ye might say handcuffed, with the names iv thousands iv illusthrus men who have occypied th' post iv honor an' danger in th' last few years. . . . We guarantee to hold ye in this great office f'r at laste a week an' thin send ye out with a dent in ye'er hat to spind the rist iv ye'er life in honorable peace attindin' to ye'er libel suits," it says.

"Sthrange to say, th' Colonel seems to be duckin' this gr-reat honor."

Goethals had written on January 14th to Mayor Mitchell that he desired to remain on the Isthmus until the Canal was finished, and that as an officer on the active list of the Army, he could only accept a civil office by resigning from the service—which was entirely out of the question—or by the President's permitting him to retire. After the Canal was finished and when he was on the retired list, even then he would not become Police Commissioner unless the law were so changed as to give him the right to remove any of his subordinates for unsatisfactory service. He would take no responsibility without authority.

On March 4, 1914, the Senate confirmed, in open legislative session, Goethals' promotion from Colonel

to Major-General. Mr. E. V. Murphy, official reporter of the Senate, wrote to him, pointing out the interesting fact that the only other instance of such a confirmation was that of General Grant, who, when he lay dying, was nominated as General on the retired list by President Arthur in the closing hours of his term, on March 4, 1885, and the confirmation took place, not, as is almost invariably the practice, in secret but in open session.

At the same time he enjoyed the unusual distinction of receiving the thanks of Congress.

"True," observed Mr. Murphy, "there were confirmed the same morning (of March 4, 1914, the nominations of General Hodges, General Sibert, and General Gorgas, and a little later that of Rear-Admiral Rousseau, but your confirmation came first; and so you have the unique distinction of not only being promoted two grades as a reward for your unexampled work as the builder of the greatest engineering project in the history of the world, but of the confirmation of promotion for the second time in our history in open legislative session of the Senate of the United States."

It was characteristic of Goethals that, though he had never met Mr. Murphy, he knew of him and his long and faithful service on the reporting staff of

the Senate since 1860, and referred to it in his reply. In answering the congratulations of another correspondent, who hailed the General's promotion as "the act of the American people and not of a few politicians," he said: "I dislike very much to destroy your ideals, which I accepted in good faith upon receipt of your letter—but they were horribly shattered by the next mail that reached the Isthmus, for I then learned that the whole thing was put through, not freely and voluntarily by Congress, but forced, it is alleged, by pressure brought to bear upon the members by those interested in the bill. The unfortunate feature is that by giving recognition to all of the men in the Government service and excluding all civilians, there has developed a class distinction which is not only unjust, but which has caused considerable feeling. This I had anticipated and feared, and it deprives the so-called reward of any sweetness or gratification that it might otherwise have brought."

The army officer had his pension to look forward to in old age; the civilian had none. The army officer received commutation of quarters; the civilian paid rent. How many other army officers in his place would have fought as Goethals did for justice for the civilians under his command?

By his own request, on November 15, 1916, Major-

General Goethals was placed upon the retired list of the Army.

In the meanwhile, the dredging fleet under W. G. ("Bull Moose") Comber was wrestling with the Cucaracha Slide. Up through Miraflores and Pedro Miguel Locks came what was then the most powerful dredge in the world, the *Corozal*, with her endless chain of buckets that could bring up ten thousand tons a day, and dig through soft volcanic rock without benefit of blasting. This vessel was built at Renfrew, Scotland, by the same conscientious firm that had sold the French Canal Company some smaller dredges that we found worth raising and restoring to service after they had lain half-submerged for twenty years in a tropical tidal swamp. The *Corozal* made the voyage across the Atlantic and round South America to the Pacific entrance of the Canal under her own steam. Among her consorts were the new American fifteen-cubic-yard dipper-dredges *Paraiso* and *Gamboa*, the smaller *Chagres* and *Mindi*, the drill-barge *Teredo*—until she blew herself up and had to be removed in sections—and a whole flotilla of auxiliaries. Moored as closely together as possible, the dredges attacked the great mass of tough red clay from both sides. Double crews and electric light enabled the work to go on by night as well as by day.

The excavated material was loaded into barges, towed away by tugs, and dumped into Gatun or Miraflores Lake, away from the channel.

By May, 1914, a channel had been dug through the Cucaracha Slide deep enough to permit barges to be towed through from ocean to ocean. These barges carried freight from steamers of the American-Hawaiian Steamship Line, which company was still being prevented from trans-shipping by the Tehuantepec Railroad because of the complicated series of civil wars in Mexico.

War between Mexico and the United States seemed close at hand, if not already begun, when our Atlantic Fleet bombarded and occupied Vera Cruz in April. Naturally, sympathy with Mexico ran high in Central America. The Secretary of War cabled Governor Goethals on the 24th of April to exercise increased vigilance in the protection of the Canal. By sundown, two companies of the Tenth were mounting guard at Gatun, another at Pedro Miguel, and one at Miraflores, to protect the locks and spillway. The Canal was put on a war footing, to meet an emergency that never arose, but in unexpectedly good time for the outbreak of the World War.

At last, after the dredges had removed upward of

two and three-quarter million cubic yards from the Cucaracha Slide, its forward movement ceased and the way was opened for an ocean-going ship to make the long-anticipated passage from sea to sea. This trip was made by the *Cristobal* of the Panama Railroad Steamship Line. For years, this voyage had been looked forward to as a great event in the history of the world. But when it came to pass it received scant notice. The date was August 3, 1914.

Perhaps it was just as well, for this trial trip was no smooth one. Writing to Major Boggs of the Washington office, Goethals reported, confidentially: "We passed the *Cristobal* through the slide successfully and without difficulty of any kind, and the vessel was handled through the Cut in a most masterful manner. An unexpected weakness developed in the lock-operating force. —— contended at Gatun that two locomotives on either end would be sufficient to do the work. The whole strain of the ship moving into the lower lock burned out a motor on one of the towing locomotives and caused considerable delay. At Pedro Miguel one of the cables of the towing locomotive parted, but another locomotive took its place. When the vessel was brought into the locks, things looked rather squally, and I feared damage to the gates, but they succeeded in stopping her in time.

At the upper lock at Miraflores a similar condition obtained, but I telephoned down and they were using three locomotives on either side and the ship was halted much more easily. It has made me rather skeptical on the towing proposition, the motors being alternating current of constant speed operating at two knots an hour and are altogether too fast for heavy ships. The cable drum can only be operated by jerks, so that the steadily increasing power can be applied by neither towing locomotive nor cable drum. There is absolutely no elasticity in the line itself, and, based on these defects, the possible danger to the gates on account of the speed of the locomotives, it may be necessary to use the ship's motive power; consequently, I have directed that the pilots take charge of towing and handling ships, as they will be the best judges of the speed and the advisability of using the ship's power should the necessity therefor arise. I am having the pilots drill with the locomotives so as to develop team-work, and in order that they may have actual experience before the *Ancon* is put through, I have decided to use the *Advance* and the *Panama*, the former on Sunday and the latter on Tuesday, for this training, as there will be little opportunity after the *Ancon* goes through, if the requests on file to pass ships are any criterion of

what we are liable to have at the outset. I sincerely trust the Secretary of War will send down a list of the guests for the *Ancon*, for unless card passes are issued it will be difficult to control the mob."

"I was very much surprised at the weakness which developed in the operating force at the locks," Goethals wrote, on August 13th, to Joseph Bucklin Bishop, who had gone to New York since the abolition of the Isthmian Canal Commission and was arranging for the publication of four articles to be written by Goethals for *Scribner's Magazine*. "The condition of affairs which arose made it impossible for me to accept the responsibility of an accident, due to the landlubbers in charge of the ship, and I am afraid ——'s feelings are hurt on account of my giving the Navy charge of the ships and towing locomotives. Since the passage of the *Cristobal* the lock forces have been drilling with barges and tugs to develop team-work in the operation of the towing locomotives, and we passed the *Advance* and *Panama* without a hitch and with more rapidity than under the old system. On Saturday, August 15th, we will put through the *Ancon* and open the Canal to commerce."

The *Ancon*, carrying a large party of Canal men, army officers, Panamanian dignitaries, and their

families, made the first official trip from ocean to ocean without a hitch. Again Goethals was not a passenger, but watched the vessel's progress critically from the shore or the lock wall, going from point to point in his railroad motor. How successfully his drills and rehearsals had developed team-work among the operatives is shown by the concluding paragraph of the letter of congratulation from Mr. John Barrett, Director General of the Pan-American Union, who had been a passenger on the *Ancon*:

"Congratulations do not mean much to you, but if I were to make any particular comment upon what impressed me most about the opening of the Canal, it would be the ease and system with which everything worked—as if the Canal had been completed and in operation for many years."

Yes, it is just as well there were no passengers on the *Cristobal*!

The Panama Canal was then declared open to the commerce of the world. During the first twelve months there passed through it 1,258 vessels, carrying 5,675,261 tons of cargo, the tolls on which amounted to $4,909,150.96. The formal official opening by the President of the United States, who was to lead a long procession of American and foreign

warships, yachts and liners, through in the *Mayflower*, was scheduled for March, 1915. The idea was persisted in by the Administration even after the outbreak of the World War, and plans for the proposed naval review were drawn up by Goethals in collaboration with Captain Hugh Rodman, U.S.N., then his Superintendent of Transportation, who was to command the 6th (American) Battle Squadron of the British Grand Fleet in the World War. But as the war progressed, the idea was dropped, to Goethals' great relief.

The outbreak of the World War brought local complications. While two belligerent peace societies were wrangling with him and with each other because, pursuant to orders from the Secretary of War, he had had the "World Ensign of Liberty and Peace" floating from the *Ancon's* foremast on August 15th, instead of the official emblem of the rival organization, the Colonel was busily complying with Secretary Garrison's other orders to put the Canal defenses into immediate readiness to prevent any violation of neutrality by a belligerent warship of either side. Several companies of Coast Artillery were sent down to man the batteries already completed, a fire-control system was improvised, and the infantry supports strengthened. At the same time,

the practice that Goethals had advocated from the beginning, and which he had succeeded in having embodied in the Panama Canal Act, of having a Canal Zone pilot take charge of every incoming ship, with guards on the deck and in the engine-room, and gangs of trained Canal employees to make fast and cast off the hawsers, warps and towing-lines, without interference by the ship's officers and crew, was put into effect. Years afterward, when H.M.S. *Renown*, with the Prince of Wales on board, passed through the Canal in time of peace, no one thought it the least bit out of the way that the King's seamen were not allowed to pass a line on the deck of a King's ship. The Canal authorities take complete charge of every vessel in transit, and their responsibility is absolute.

Four large German steamers, the *Savoia, Grunewald, Prinz Sigismund* and *Sachsenwald* of the Hamburg-American Line sought refuge in the neutral port of Cristobal. Their officers persisted in sending out messages by the ships' radios, in defiance of Goethals' warning that such procedure constituted a violation of neutrality. The messages were, of course, intercepted by the local wireless stations. Having obtained sufficient evidence, Goethals had the ships' radios dismantled and guards placed

aboard. The consequence was that these were the only German ships interned in American harbors that were undamaged by sabotage and ready for immediate use when the United States entered the war, in 1917.

It was not until September, 1916, that Goethals was able to leave the Isthmus. The opening of the Canal in 1914 proved to be only temporary. In October, 1915, the channel was completely blocked by two formidable slides, directly opposite each other on the banks of the Cut, a little north of Gold Hill. Both of these slides were of the type known as "breaks," where the weight of the bank caused the underlying material to snap off and give way like an overloaded floor-beam. In each of these areas, about eighty acres of ground sank almost straight down to an average depth of twenty feet. Squeezed between its sinking banks, the bottom of the Canal naturally rose up, forming first an island, then a peninsula, and finally a complete barrier. As fast as the dredges dug this away, more material came down from each side, in regular waves. The tops of these slides were too broken to permit their being lightened by steam-shovels, nor could anything be done by washing the earth with powerful hydraulic nozzles down the side of the slope away from the Cut, as

had been done at the Cucaracha. The only course was to keep the dredges digging away until there was nothing more left to dig. It was not until April, 1916, that the Canal was reopened to commerce.

Goethals had long since chosen the man who was to succeed him as Governor: Colonel (now Brigadier-General, retired) Chester Harding, of the Corps of Engineers. He had been assistant divisional engineer of the Atlantic Division from 1908 to 1913, when he had gone to Washington to become the Engineer Commissioner of the District of Columbia. Why he was detailed to return to the Isthmus as Engineer of Maintenance may now be revealed.

"Colonel Harding," declared a confidential memorandum for the Secretary of War, August 22, 1914, "is eminently fitted for the position of Governor. He was on duty in the Engineering Department on the Isthmus for over five years, was in thorough accord with Colonel Goethals during the entire period, and knows probably better than any other engineer officer of his rank the ideas in connection with the operation of the Canal which were in Colonel Goethals' mind when various regulations and organizations were drawn up. The detailing of Colonel Harding as Engineer of Maintenance, and afterward as Governor, would insure the carry-

ing out of the plans of Colonel Goethals, the first Governor, without any material modification.

"Colonel Harding is essentially fitted for this position on account . . . of the mature judgment with which he treats all questions, and the lack of friction and the ease with which he deals with all classes and kinds of people.

"If Colonel Harding is chosen for this position, it is unquestionably a fact that the Panama Canal matters would be carried on with the least amount of trouble and worry to both yourself and the President."

Indorsing this statement, Goethals observed, "Harding has the ideal qualifications and you have summed them up very satisfactorily."

His work was done. The Panama Canal was built and its operation secure. There was nothing more to keep Goethals on the Isthmus. He had already spoken his farewell at the annual banquet of the Society of the Chagres at the Tivoli Hotel, March 6, 1915.

"We are gathered here tonight," he said in conclusion, "not in the hope of something yet to be accomplished, but of actual accomplishment: the two oceans have been united. The slides hinder and prevent navigation for a few days, but in time they will

be removed. The construction of the Canal means but little in comparison with its coming usefulness to the world and what it will bring about. Its completion is due to the brain and brawn of the men who are gathered here—men who have served loyally and well; and no commander in the world ever had a more faithful force than that which worked with me in building the Panama Canal."

CHAPTER XIV

WOOD AND STEEL

GOETHALS left the Isthmus for the last time in September, 1916, by the United Fruit Company's steamer *Pastores*. When he came down the gangway at New York, on October 2nd, the reporters were waiting for him. What was he going to do next?

"Well," answered Goethals, "I'm going to look around for a job."

Four days later, President Wilson named him as chairman of the new board created by Congress to report on the operation of the Adamson eight-hour law. The other two members were Mr. Edgar E. Clark of the Interstate Commerce Commission and Mr. George Rublee of the Federal Trade Commission—an able lawyer who was soon to be associated with Goethals in the Emergency Fleet Corporation.

General Goethals passed into the retired list of the army, after forty years' service, on his own application made the previous July, on November 15,

1916. A few days afterward, he announced his intention of going into practice as a consulting engineer in January, 1917, with offices at 43 Exchange Place. George M. Wells was to be with him, Sydney B. Williamson was to come up from Chile and enter the new firm later, while at the desk marked "Private Secretary" sat the familiar figure of William H. May.

One of the earliest visitors was a tall, scholarly-looking gentleman from New England—Mr. F. A. Eustis of Milton, Massachusetts, who called to ask General Goethals what he thought about his scheme for the quantity mass production of wooden ships.

As Mr. Edward N. Hurley observes in his book:[1] "We were still at peace. Hence the Shipping Act of [September 7] 1916, which created the Shipping Board, was not, strictly speaking, a piece of American war legislation. Moreover, the Act as it stood at the time of its passage would not have enabled us to meet the exigencies of the war into which we were destined to be plunged.

"The title of the Act indicated its purpose. It reads: 'An Act to establish a United States Shipping Board for the purpose of encouraging, developing,

[1] Hurley, Edward N., p. 22, *The Bridge to France*. Philadelphia & London. J. B. Lippincott, 1927.

and creating a naval auxiliary and naval reserve and a Merchant Marine to meet the requirements of the commerce of the United States with its territories and possessions and with foreign countries; to regulate carriers by water engaged in the foreign and interstate commerce of the United States for other purposes.' The Board was to consist of five Commissioners,[1] to be appointed by the President with the advice and consent of the Senate, and was granted broad powers to construct, equip or acquire vessels suitable for commerce and military and naval purposes. Most important of all, it was given the power to form one or more corporations for the purchase, construction, equipment, lease, charter, maintenance and operation of merchant vessels in the commerce of the United States under certain conditions. It could subscribe for the stock of these corporations, protect government interests, and sell stock to the public with the approval of the President. The Board had other powers which need not be dwelt upon here—powers which gave complete control over American ships and shipping."

President Wilson appointed as the five commissioners Messrs. William Denman of San Francisco, Bernard N. Baker of Baltimore, John A. Donald of

[1] Afterward increased to seven by the Merchant Marine Act of 1920.

New York, James B. White of Kansas City, and Theodore Brent of New Orleans, and sent their names in the order listed to the Senate for ratification. Senator Phelan of California raised the objection that a company formerly headed by Mr. Donald was said to have employed Chinese coolies to the exclusion of American seamen, and this point was debated at such length that Mr. Donald's appointment was not ratified until January 23, 1917. Before then, the organization of the Board was not legally possible. But there appears to have been some preliminary discussion, culminating in the abrupt resignation of one of the members of the Board.

Secretary of the Treasury William G. McAdoo issued, on January 27th, this formal statement to the press:[1]

"It is true that Mr. Bernard N. Baker has resigned from the Shipping Board, and that the President has accepted his resignation. Mr. Baker resigned because I suggested to him that I thought it would be wise, in the circumstances, if the Board would consider giving the chairmanship to the Pacific Coast. The President was in accord with this suggestion. Mr. Baker said he desired to think the matter

[1] *New York Times*, January 28, i, 8:3.

over for the night. The next morning he sent in his resignation.

"The selection of suitable men for the Shipping Board and the proper organization of the Board have been matters of great concern to the Administration ever since the passage of the Shipping Bill. The suggestion about the chairmanship was made in a spirit of coöperation and with a desire to be helpful. The Board has the right under the law to select its own chairman, but there is no reason why a suggestion from the Administration should not receive consideration. I have a warm regard always for Mr. Baker, and I regret his hasty action."

Mr. Baker's story is told in two letters, one to Mr. McAdoo and the other to President Wilson, copies of which he inclosed in a letter to General Goethals, dated April 24, 1917. Incidentally, Bernard Baker had founded the Atlantic Transport Line and built up its fleet, during his presidency, from one to sixteen ocean-going steamers.

"For the past ten years," he wrote to President Wilson, on April 19th, "no man in the United States has devoted more time or expenditure of his own personal funds in an effort to establish an American Merchant Marine than I. Four years ago last March, when I had the honor of an interview with you, at

which Dr. Welch, President of the Johns Hopkins was present, you said you counted upon me to assist when the time came to take up the question of legislation for the upbuilding of our merchant marine. From that time until the present I have devoted my entire time, and expended over $40,000 in this particular work.

"When Secretary McAdoo informed me January 24th last that I must see that Mr. Denman was made Chairman of the Shipping Board when organized, and I found in my discussions with Mr. Denman that he demanded that a policy be adopted by the Board for the vigorous prosecution of the cases of discrimination on file in the State Department by the English Government and steamship owners, I could not feel that it was to the best interest of our country, and having in mind your constant appeals to all good men to avoid by word or deed anything that would increase the feeling then so intense, I felt that I must resign from the Board.

"When I received your kind letter of January 26th, in which you expressed regret that I felt obliged to take that course, I at once replied that I would appreciate an opportunity of an interview to give you my reasons for doing so. I regret very much

that you did not feel that you could reply to that letter.

"Presidents McKinley, Roosevelt and Taft, due to my long practical knowledge and experience, called upon me for such services.

"During the Spanish-American War I presented and maintained at my own expense for the United States Government and the War Department the Hospital Ship *Missouri.*

"I have given you in as concise a way as possible, as I hope to be able to place before you in an interview, the reasons governing my action in resigning from the Board. I beg to state, Mr. President, that I am now and always have been ready to give to our country and to your Administration most hearty, active, and loyal support in carrying out the development of the merchant marine.

"With great respect and esteem, I beg to remain,

Yours sincerely,

BERNARD N. BAKER.

"P.S. I take the liberty of enclosing a copy of a letter dated February 27th, addressed to the Hon. Wm. G. McAdoo."

There is one sturdy paragraph in that letter to the Hon. Wm. G. McAdoo where the gray-haired old

shipping man from Baltimore stands to his guns like the garrison of Fort McHenry:

"When you made the request to me that Mr. Denman should be elected Chairman, I concluded immediately that I could not, in justice to myself and what I believed to be the best interests of our country, consent for a moment to the adoption of such a policy. Independent of this I could not recognize as a principle of justice or right that I should pledge myself, or my influence with any of the members of the Board, to the election of the Chairman prior to the organization of the Board; I believed that the gentlemen constituting the Board should have absolute freedom of action as to what they considered best for the interests they had taken an oath to protect to the best of their ability."

From this episode, two things seem fairly evident: first, that the Administration was thoroughly in accord with Mr. William Denman, and second, that any independent action on the part of his colleagues on the Shipping Board was not encouraged.

Mr. Denman's concept of the functions of the Shipping Board was very clearly set forth in his speech before the Chamber of Commerce of the State of New York on April 5, 1917:

"There have been two conceptions of the organiza-

tion of the Board. The first was that of Mr. Bernard N. Baker, who desired that the Board should be a body subordinated to the Cabinet, and whose administrative functions would necessarily be bound up with the policies of the successful parties in control of the Government. Under this plan, as set forth in his very interesting book entitled *Ships*, this responsiveness to the Administration was secured by appointing two officers of the President's cabinet in a Board of five members. Such a conception was calculated to procure political flexibility and efficient subservience to and coördination with the varying party platforms."

"Others," continued Mr. Denman, "felt that the Board should be a tribunal like the Interstate Commerce Commission, though with its regulative and punitive functions thoroughly subordinated to those higher duties of creation and stimulation of American overseas commerce and shipping. The latter view prevailed, and we trust that at the end of the year you will think as little of the political affiliations of the Commissioners as you do of the members of the Interstate Commerce Commission." [1]

Earlier in this speech Mr. Denman had said: "In my practice I have litigated ships"—a phrase as in-

[1] *Bulletin* of the Chamber of Commerce of the State of New York, April, 1917, p. 53.

stinctive and illuminating as Goethals' equally quaint sea language, "Halting the ship." One betrays the lawyer, the other the soldier. What came to pass was very largely the natural outcome of the inherent differences between the legal and the military mind. Against Goethals' forty years' service from plebe to major-general may be set Mr. Denman's practice in maritime causes, as related by himself before a Committee of the House.

THE CHAIRMAN. What experience have you had in shipping, either in building or in operating or supervising, prior to your appointment on the board?

MR. DENMAN. Oh, I have been connected with maritime matters since 1898. The first case I had took me down the Pacific coast to Central America to get the property of Madame Barrios, the property of the widow of the murdered President. In the course of the proceedings with President Cabrero, I received considerable assistance from the Pacific Mail Steamship Route, which was influential in Guatemala at that time.

THE CHAIRMAN. You were counsel for her?

MR. DENMAN. Yes, sir. While I was counsel for her I established friendships with the lead-

ers of the Pacific Mail Steamship Co., Mr. Schwerin, Mr. Fry, and others, and I have been at some times attorney for the Pacific Mail and at many other times against them, and through them I have had familiarity with many shipping matters. I have supervised contracts for the building of ships. I was attorney for one of the shipbuilding yards on the coast there that originally built wooden ships but that had ceased to build them before the war and built none during the war. It had become a steel yard. I came in contact with the oil situation as Assistant Attorney-General of the United States in control of oil litigation at its beginning and there made a study of oil conditions. I was attorney for Fred. Olsen's fleet of Diesel motor-ships, which for a long time before I went on the Shipping Board had been operating those ships between Scandinavia and the United States. I have operated ships myself; in fact, I have sailed two wooden Hough ships during the last two years over 120,000 miles on the Pacific, and have carried over 200,000,000 feet of lumber. I know something

about the wooden ship and its obsolescence and its small remaining usefulness.[1]

The date of this hearing was December 13, 1920.

Mr. Denman's account of his relations with General Goethals is told at length in the hearings before the Committee.

(The committee met in exhibit room No. 6, Pennsylvania Hotel, New York, December 1, 1920, at 9:15 o'clock A.M., Hon. Joseph Walsh [chairman] presiding.)

PRESENT ALSO: Hon. Patrick H. Kelly, Member of the committee.

THE CHAIRMAN. Mr. Denman, did you wish to make a statement to the committee?

MR. DENMAN. Before the committee reassembles, I desire to state briefly the constructive suggestions that I hope to elaborate when you hear me at the next or later session.

. . . . . .

THE CHAIRMAN. How long will it take you to make a brief statement of what you desire?

MR. DENMAN. I should say about ten minutes.

[1] *Hearings before Select Committee on U. S. Shipping Board Operations, House of Representatives, Sixty-sixth Congress, Third Session,* pp. 3176-3177. Washington, Government Printing Office, 1920.

[2] *Ibid.,* p. 3107.

TESTIMONY OF MR. WILLIAM DENMAN, OF SAN FRANCISCO, CALIF.

(The witness was duly sworn by the chairman.)

THE CHAIRMAN. You have a matter which you desire to bring to our attention briefly, which may be the subject of further inquiry by the committee, and we ask you to state the matter now concisely.

MR. DENMAN. . . . . I take it from my conversation with you that the major purpose of your committee is to reach constructive policies and to receive such constructive suggestions as may come from men who are more or less qualified to give them.

It is in the latter connection that I desire to speak at length at a proper time. I desire also, coincident to [that], to kill the so-called Denman-Goethals controversy over wooden ships.

THE CHAIRMAN. Do you think you can do that in ten minutes?

MR. DENMAN. No; I am not going to do that in ten minutes. I am simply going to show that there never was any such controversy; that General Goethals from the time I first met him to the end of my contact with him was always for

the building of as many wooden ships as could possibly be constructed, and at my last session with him he regretted with great bitterness the contrary reports which had been attributed to him. That was a conversation taken down by a stenographer and is a part of the records of the Shipping Board.

Not only that, I was never in favor of building wooden ships at the expense of steel, and I will show that my policy contemplated the building of an auxiliary wooden fleet, and that my major policy, long before I engaged Goethals or caused him to be engaged, was building a steel fleet.

I shall show, when the time comes, Goethals' enormous accomplishment in contracts and in plans for contracts, which by some strange perversion of the Shipping Board records all were attributed to the next administration—the number of ships signed for by Goethals, the number of vessels arranged for by Goethals in the brief period of two months was simply enormous. It exceeded something like six hundred vessels.

As a matter of fact, he and I signed

in a period of sixty days contracts aggregating some $300,000,000 without the scratch of a pen or the authority from anybody. They were afterwards ratified.

I am speaking of this briefly, because I think the country would hesitate to accept any suggestion I have to make, under the impression that I ever advocated building wooden ships for anything but a war purpose, or even advocated building wooden ships for anything except as an auxiliary of our major steel program.

The wooden-ship project was not mine. The project that I brought to the board, and on which I made a very considerable accomplishment, was the building of Diesel-engine vessels, which should become a part and subsequently a large part of American fleets. . . .

THE CHAIRMAN. I understand from your statement that you are prepared to produce facts to prove these things which you say you will show, Mr. Denman?

MR. DENMAN. Yes.

THE CHAIRMAN. Facts?

MR. DENMAN. Yes, I will produce the facts with reference to Gen. Goethals in regard to

wooden ships and the value of his position on them. . . .

THE CHAIRMAN. You state there was no controversy between yourself and Gen. Goethals over the wooden shipbuilding program?

MR. DENMAN. Oh, with reference to the principles of the program. There was some disagreements as to the design, which were of slight importance.

THE CHAIRMAN. Was there a controversy between you about anything?

MR. DENMAN. Yes.

THE CHAIRMAN. And was that controversy the reason or the cause for your both leaving the Board?

MR. DENMAN. The controversy was used in getting both of us out of the Board, with the result that just at the time this great project of building Diesel vessels was about to be consummated, we withdrew.

. . . . . .

(Thereupon, at 1:05 P.M. the committee adjourned to meet in Washington, D. C., upon the call of the chairman.) [1]

General Goethals' account of his experience with the U.S. Shipping Board is told by himself, in the first person, in a narrative dictated by him in Janu-

[1] Condensed from *Hearings*, pp. 3166-3170.

ary, 1918, approved by him, and filed among his private papers, where it was discovered after his death. It begins with the entrance of Mr. F. A. Eustis.

"Mr. Eustis, a Massachusetts man, came to see me in New York to get my views on the construction of wooden ships for the transportation of supplies to the Allies," General Goethals commences his story. "I told him that the schooner type of wooden ship, with possibly small auxiliary power, would meet the situation, but I did not regard with favor the construction of wooden ships propelled by steam power, as I did not believe wood could be molded into ships so as to withstand the pounding of the waves and the racking that would be caused by the engines."

Mr. Eustis was and is a metallurgical engineer and also an enthusiastic yachtsman. In the course of his practice, he had observed the ability of the large wooden coastwise schooners and barges to carry coal, ore, and other heavy cargoes. This had given him the idea of having the Shipping Board build a large fleet of standardized wooden ships for relieving the shortage of shipping from which America, then still a neutral power, was suffering.

When asked to give his own recollection of this first interview between himself and General Goethals,

Mr. Eustis wrote: "I cannot remember much about the interview with General Goethals to which you refer. Before going to Washington to try to interest the government in building emergency shipping I did consult several men about the feasibility of emergency ships and especially wooden ships and very probably I did see Goethals at this time."

Mr. George Wells, who was then associated with General Goethals, remembers distinctly that Mr. Eustis called to see the General at the office in Exchange Place.

"The wooden-ship project," testified Mr. Denman in 1920, "was brought to us by Mr. F. A. Eustis, a well-known yachtsman and manufacturing metallurgist. He came to me in the latter part of February, 1917, and urged us to build as many wooden ships as we could on account of the sinkings in the North Atlantic, then becoming very large. I knew about the wooden ship, because I say, I was attorney for a wooden-ship plant and had litigated many ships of wood construction, and was familiar with their hulls, and particularly with that type of large wooden steamer that was used in the coastwise trade on the Pacific. I told Eustis that I did not think we could get the engines, but I knew we could build the hulls. He said there was a large number of factories in the

Ohio and Mississippi Valleys that could build engines sizable for these wooden ships.

"I then said I did not believe we could persuade the Congress to accept such a program; that as the ships were commercially obsolete there would be such an outcry against them that the Congress would not go on the venture. He said to me 'Well, if you can get behind you some of the biggest men in the country do you think the Congress would accept?'

"He mentioned a group of men, and I think General Goethals. I said, 'If you can get that group, or the General himself, to advocate the building of wooden ships I think the Congress would be willing to accept the project, always as a supplemental fleet to steel.' "[1]

"While in Philadelphia in March following," declared Goethals, "I got a telegram from the office that Mr. Eustis and Mr. Denman wanted to get in touch with me in Philadelphia. I advised them through the office that I would be at the Bellevue-Stratford Hotel and could see them on a certain evening."

Examination of the transient ledger of that hotel shows that General Goethals occupied Room 619 at the Bellevue-Stratford for the nights of March 5th,

[1] *Hearings*, p. 3188.

6th, and 7th, 1917. He spent no other time at that hotel during that month. The interview, therefore, must have been on one of those three evenings.

"Denman telephoned me," continues Goethals, "that he could not come as he had an engagement in New York that evening, but Eustis would be there. Eustis informed me that the Shipping Board had put a proposition up to the President for the construction of a fleet of wooden ships of about three-thousand-ton capacity which could be turned out beginning the following October, and which would relieve the critical shipping conditions. It was necessary to get some one to take charge and the Shipping Board was very desirous of having me take hold. I explained that I did not have any faith in the wooden ship but, aside from this, the work did not appeal to me and I had no desire whatever to handle it. If we were to enter the war I preferred military duty. I assumed that a man having thorough knowledge of the details of ship-building would be the type desired for such a position, and stated that the managers of successful ship-building companies in this country ought to furnish the proper material for the position. We parted with the understanding that under no circumstances would I consider the office."

When shown a copy of Goethals' account of this interview between them, Mr. Eustis nodded and said, "That is what happened." In corroboration he submits a letter from Mr. F. Huntington Clark, another advocate of wooden ships who was associated with him at this time.

"The first mention of General Goethals name," Mr. Clark writes from New Orleans to Mr. Eustis in Boston, "was in a conversation between us, when you asked me who I thought would be the best man to head the Emergency Fleet Corporation, and then stated you had thought of General Goethals. This suggestion seemed to me an excellent one and I understood from a later conversation with you that you had secured the approval of Mr. Denman and the Board. Later you called on General Goethals and told me of your conversation with him in which he refused to accept the appointment on account of his lack of knowledge of the technical side of the business."

"My recollection is clear," writes Mr. Eustis, "that General Goethals came to the Shipping Board offices and was introduced to Mr. Denman after I had called upon him in Philadelphia."

Goethals, in his narrative above mentioned, before describing the interview at the Bellevue-Stratford

says: "Early in 1917, while in Washington in connection with the Eight-hour Commission work, Mr. Denman, chairman of the Shipping Board, expressed a desire to see me. I called at his office, found him very much impressed with the idea of building wooden ships, as they were being built and used on the Pacific Coast, and I reiterated the views that I held and developed them to Mr. Eustis, who was also present at the interview."

Mr. Eustis declares that he himself introduced Goethals to Mr. Denman, but that he did not remain long in the same room with them after that. Mr. Denman, in his testimony before the Committee of the House in 1920, makes no reference whatever to the Bellevue-Stratford interview, but proceeds directly, after his approval of Eustis' offer to get the General's approval of the wooden-ship project:

"About a week after that Eustis came in to me and said General Goethals was in our drafting-room. I went in and met him. During that conversation he had on his lap plans of these two wooden Hough ships that I have operated myself. . . . They were smaller than the ships we afterward constructed, but they were stronger and were successful, as were both types. General Goethals said: 'Denman, this is what you want to do. Sinkings are so great in the Channel

and the North Sea that you ought to build as many as you can.'

"The discussion lasted some time and Mr. White and a number of others I recall were there. He left, and as he left he said, 'Now, anything I can do to help you out on this I will be glad to do.'

"I think what the General had in mind at that time was if we wanted to call him before a Congressional Committee he would be glad to offer his services. But I took it to mean that if we wanted to call upon him as constructor to assist us he would be glad to do it. General Goethals was not seeking a job, and I did not have that in mind, but I offered him $50,000 a year, or suggested that as an amount, and he laughed and said, 'No; I will take my army pay.'

"There was never any question of pay about the General. He is a good American." [1]

The Mr. White mentioned in the *Hearings* is Captain J. B. White of Kansas City, then a member of the Shipping Board, who died in 1923. But there was another member of the Board, who had been appointed in the place of Bernard Baker and with whom Goethals had an interview at this time: Mr. Raymond B. Stevens of New Hampshire. He had

[1] *Hearings*, pp. 3188-3189.

been a Democratic Congressman, with no previous experience in shipping. Mr. Denman refers to him as a charming and very able man, who was appointed as "our political member." [1] Mr. Stevens later became vice-chairman of the Board and remained in that position until 1920, when Mr. Hurley selected him to represent the Board on the Allied Maritime Transport Council. He is now adviser on foreign affairs to the Siamese Government. During his visit to the United States in the summer of 1929, Mr. Stevens was interviewed and declared positively that Goethals, at the time of his visit to the Shipping Board office in March, 1917, had called upon him and spent some time with Mr. Stevens in his room; that Goethals had then expressed a very unfavorable opinion of the proposed wooden ships, and declared that he did not want to undertake their construction, particularly as he desired and hoped to see service in France, should the United States enter the war.

In July, 1926, Mr. Edward N. Hurley was preparing his book *The Bridge to France,* for publication. On July 12th, he wrote to Goethals: "I asked Mr. Denman if he would inform me how the name 'Emergency Fleet Corporation' was brought about. I did not ask him anything about the wood ship pro-

[1] *Ibid.,* p. 3172.

gram, but he volunteered the enclosed regarding the emergency fleet as well as the wood ship program. I will greatly appreciate it if you would blue pencil any part of this that you do not agree with. . . ."

Goethals answered, on July 20th: "I take strong exceptions to Mr. Denman's statement: '. . . General Goethals called on us in the Munsey Building and urged us to build the wooden fleet, as a supplement to our major plan. . . .' . . . Of course I appreciate that your book is not dealing with the controversy between Denman and myself at that time, but I feel that it might be pertinent for you to state, after his quotation, that I deny having urged or endorsed the building of a wooden fleet."

Mr. Hurley replied: "I note what you say regarding the notes which I sent you from Mr. Denman and I am following your suggestions."

Neither statement nor denial was printed in Mr. Hurley's book. These letters are here quoted with his permission.

On March 10th, the Shipping Board issued a call to the chief builders of wooden ships on the Atlantic and Gulf coasts to attend a meeting of the Board in Washington on March 14th, to confer on the construction of a large number of wooden ships, from

3,000 to 3,600 tons, to be built in one or more standard sizes.[1]

On March 12th, General Goethals went from New York to confer with Governor Edge at the State House in Trenton, at the Governor's invitation, about Goethals' taking charge of the $15,000,000 program of new state highways, just authorized by the legislature. It was announced in the press, quite correctly, that Goethals would accept this position.[2] He evidently felt perfectly free to accept it.

On March 13th, Mr. Denman held conferences with shipping men at the Biltmore Hotel, New York, until midnight, when he left for Washington to attend a meeting of shipping experts—presumably the builders of wooden ships invited on the 10th.

"The supply of skilled workers is limited," Mr. Denman said, "and when it became apparent that the building of merchant ships would be delayed on that account, the Board started work on its plan of standardizing wooden construction. We have been at work about three weeks on the plan. There are wooden vessels on the Pacific Coast constructed to carry 3,600 tons dead weight. The parts of such ships will be standardized so as to allow them to be cut at

[1] *New York Times*, March 11, i., 1:6.
[2] *Ibid.*, March 13, 22:2. See chapter xvi.

various mills in the timber regions, either on the Pacific Coast, the South, or the New England Coast. These parts, cut at many mills, will be sent to yards at different points, where they may be assembled.

"With the growth of steel ship construction, the supply of ship carpenters has been growing smaller constantly, and that is one of the difficulties which we face in the construction of wooden ships. We have planned, however, to get the services of house carpenters, with a skilled ship's carpenter over every seven or eight of them. These ships may be turned out at the rate of one every four months at first, and at a much greater rate when the plan is put into full operation."

This was published in the *New York Times* for March 14, 1917. The interview concluded: "The Shipping Board is devoting all its time to preparedness problems, Mr. Denman said. In perfecting the wooden-ship plan, he said, one of the objects of the Board was to arrange to build ships which would be useful after the war for ordinary commercial purposes."

Three things are noteworthy about this statement given out by Mr. Denman to the press: its early

date, the all-wooden nature of the Board's construction program, and the fact that in March, 1917, Mr. Denman felt that these wooden standardized ships would be useful after the war for ordinary commercial purposes. In 1920, testifying about himself and General Goethals, he said: "We both detested the idea of wooden ships. We knew they were obsolete." [1]

". . . . I went to New York," said Mr. Denman in 1920, "and announced our steel major program and described in detail at a meeting in New York at the Chamber of Commerce our wooden program. This was the day before war was declared. The country was in a state of hysteria, and overnight the journalists of New York built me a bridge of wooden ships from New York to Liverpool, over which the victorious army of American people and the sutlers' wagons were going over to succor Europe. It was absurd. In those reports there was nothing said about our major scheme of building steel ships; but, fortunately for the record of the thing, my speech was taken down and afterwards published." [2]

"Some weeks ago," said President E. H. Outerbridge of the Chamber of Commerce, in his introductory remarks, "knowing that there had been no

[1] *Hearings*, p. 3189.
[2] *Ibid.*, p. 3189.

subject in which the Chamber was more deeply interested than the restoration of an American Merchant Marine, Mr. Bush, the Chairman of our Committee on the Harbor and Shipping, went to Washington to ask Mr. Denman, the Chairman of the Shipping Board, and our guest of honor today, to come and speak to us about the policies and the prospects, as he saw them, of the Shipping Board and the Merchant Marine. . . .

"I think, therefore, that we are very fortunate in having Mr. Denman here today, and while when we first asked him we had in view only a discussion on the academic and practical questions of the restoration of an American Merchant Marine, under the circumstances that prevail today,[1] this meeting takes on a greater importance, as it is more than likely that the million or more tons of merchant shipping now on the stocks in this country may at this moment be a much more valuable asset in the prosecution of this war and in the immediate protection of this country and for the assistance of those prosecuting this war with us than a million tons of naval ship-

[1] Twenty-four hours earlier, on April 4th, the President had asked Congress to declare that through the actions of the Imperial German Government a state of war existed between Germany and the United States.

ping fully manned, equipped and munitioned would be.[1]

"I have great pleasure in introducing to you Mr. Denman, Chairman of the Shipping Board."

"About seven weeks ago," said Mr. Denman in his speech, "we began to organize for the purpose of supplementing the transatlantic tonnage with ships from a source that would not disturb the major steel program of construction which the Chairman has referred to.

"Those of us who come from the Pacific Coast are familiar with the wooden ship; it has dropped out of commercial life until very recently, on the Atlantic, and for the very good reason that wood cannot compete with steel under any plan of construction we now have of wood, even though the vessels have an equal commercial value at the time of construction. The upkeep and other costs in the operation of wooden vessels have put them out of the running with steel construction, under normal conditions of the price of steel. In this emergency, however, the only place we could turn to for additional tonnage was to the forest and to the unorganized

[1] On March 14th, Secretary Daniels had announced the immediate construction of five large battle-cruisers and a number of light cruisers and destroyers, thereby still further congesting the already overtaxed private shipyards of the country.

forces of the wood-working labor and the smaller machine shops and the smaller boiler factories not serving the steel yards. The idea of a great wooden fleet has long been with us on the Pacific Coast, because our great timber owners there have been looking for some means to get the enormous resources of those forests at work in the world. But we had one fear—that was about the engines; and we have spent the greater portion of the time since we began last February in working out the details of some scheme to stimulate the construction of engines for vessels of the type that we could build out of wood. As the result of those investigations we have been able to advise the President and the Council of National Defense that, under a proper organization, having at its head some such a man as General Goethals, we would be able to produce, monthly, without a disturbance of the steel industry, in the neighborhood of 200,000 tons of wooden vessels, and this probably at a period beginning seven and eight months from the time work was undertaken. The vessels would be somewhat in the neighborhood of 3,000 to 3,600 tons of dead-weight capacity, of a speed of ten knots over the safer portions of the run across the Atlantic and of twelve knots after reaching the danger zone. It is within the range of possibility that we could have a

fleet of 800 to 1,000 of such vessels within a period of fourteen to sixteen months' time.

"We figured that with the supply of steel vessels at the command of the Allies, they would be entirely safe over a period of eight to ten months, assuming the highest destructivity claimed for the submarine; and, if they were certain that at the end of that time the combined production of steel ships and wooden ships would exceed or keep pace with the destructivity of the submarine, then the successful outcome of the war was assured. So we anticipate, unless our investigations are all of no value, that the Shipping Board would be able to render to the Allies a carrying service which will increase at the rate, as I say, of 200,000 tons a month under proper pressure, and after the first of November, or thereabouts. [Applause.]

"These vessels will not be a total economic loss after the war. They have a life on the Pacific Coast of from twenty-five to thirty-five years. In my practice I have litigated ships, steamships constructed of wood, over thirty years of age that were still carrying perishable cargoes. The timber of the Coast lends itself to a very simple treatment against decay. You can take green timber and put it into a ship, and still have a vessel that is substantially as good or

within five per cent as good as the more seasoned material, which of course we prefer to have. However, that is a matter of small consequence, provided the life of such a vessel would extend over the period of the war."

"Mr. Denman, in opening his address, made no reference to increasing the capacity for the production of steel ships," wrote Mr. Outerbridge in the *Bulletin* of the Chamber of Commerce for June, 1923, "but . . . declared the policy of the Shipping Board to be to build wooden vessels. . . . This pronouncement literally produced consternation among the experienced shipping men of the Chamber.

"At the afternoon conference it was embarrassing and difficult for them to speak their minds freely after this had been presented as the adopted official program of the Shipping Board.

"In spite of this embarrassment, however, the impracticability of obtaining suitable materials and labor for wooden ship-building, and of constructing wooden steamships of sufficient size and speed, was emphatically stated, and it was further pointed out that even if practicable such ships would be useless after the war for merchant marine purposes. The discussion continued during the afternoon and eve-

ning, but Mr. Denman gave no indication whether it had changed his point of view in any degree."

Besides the reference to "some such a man as General Goethals" to head an organization for building the proposed wooden ships, Mr. Denman referred to him twice in his address before the Chamber of Commerce:

"The scheme which the Shipping Board has outlined has been approved by the Council of National Defense, by the Secretary of War, the Secretary of the Navy, and a number of engineers and leading shipbuilding men, including General Goethals, who called on us a week or so ago, amongst the others. We anticipate we will be able to make use of General Goethals' services, as he at that time offered his help and advice."

The extent of General Goethals' approval, as set down in his own words, has already been indicated. What sort of help and advice he not only appears to have offered but actually did give the Shipping Board at this time is evident from a series of letters exchanged between him and Mr. Eustis, dated from March 27 to April 9, 1917. In these letters, Mr. Eustis, as a "special agent" of the Board, asks General Goethals to recommend some good marine engineer, thanks him for giving the address of an

engineer named Brown, and so forth. In none of these letters is there the least mention of Goethals' working for the Board; Mr. Eustis already had first-hand information on that point. When questioned about these letters, Mr. Eustis explained that he had hoped, by deferring to the General's choice of men, to keep in touch with him and in his good graces and so eventually to persuade Goethals to change his mind.

In the meanwhile, Goethals had found another job. On March 29th he accepted the post of State Engineer of New Jersey.[1] On Wednesday, April 4th, he started on an inspection tour of the highways of that state, in company with other engineers.[2]

"About a week after that," testified Mr. Denman in 1920, "I went to the President and asked him to call General Goethals to assist us in the building of our war tonnage. And the President did call him, and General Goethals did come to us, and he did build all the steel, or started, initiated the building of all the steel and all the wooden ships that could be built. Where the controversy story came out about wooden ships[3] ——"

[1] See chapter xvi.

[2] *New York Times*, April 8th, ix, 2:1.

[3] *Hearings*, p. 3189. At this point, the chairman went on to other matters.

The President's invitation was preceded and accompanied by some very effective publicity. On April 9th, President Wilson formally approved the Shipping Board's plan for building a thousand wooden ships, while Mr. Denman announced, rather optimistically, that "barring an unforeseen hitch, by October the shipyards on the Atlantic and Pacific would be turning out the new vessels at the rate of two or three a day . . ." [1] Twenty-four hours later, "The President is considering asking Major-General Goethals to take general charge of building these vessels." On the 11th it was given out to the press, quite correctly, that President Wilson wrote today to Major-General Goethals, asking him to take charge, and so forth. On the 12th some one in Washington announced that the plans were "virtually complete" and that Goethals had been selected; while at Trenton, where he was attending a meeting of the new State Highway Commission, Goethals called up his New York office, learned that no letter from the President had been received there, and declined to make any further statement to the reporters than this: "If the call comes to me to serve my country in any way, I can do nothing but respond."

Later in the day the letter was received. It is the

[1] See *New York Times* Index for April 10-14, 1917.

first of five written by President Wilson to General Goethals at this period.

Fortunately, from any historian's point of view, Goethals' statement of the contents of this and of one or two others of this series comes very close indeed to the President's own words.

"On April 12, 1917," he said in his narrative, "I received a letter from the President, stating that he had recently approved the recommendation of the Shipping Board for the construction of a fleet of wooden ships, that he had learned from the Shipping Board that heading an organization to do the work would be very acceptable duty to me, asked me to take the position and to get in immediate touch with the Shipping Board. By telegraph I requested a meeting with the Shipping Board on the following Saturday at half past nine, which was agreeable to them."

Mr. Raymond B. Stevens has a vivid recollection of Goethals' striding up and down the hallway outside the room where he was to meet the Board on that morning of Saturday, April 14, 1917.

"He was there ahead of time," said Mr. Stevens, "and he was the angriest-looking man I'd ever seen. He was just glaring. But when he gave me a look, I saw that he wasn't angry with me."

"Taking the President's letter with me, I appeared before Denman, Stevens [Vice-Chairman of the Shipping Board],[1] and Donald [member of the Shipping Board]," continues Goethals. "Mr. Denman outlined the plan very much along the lines stated by Mr. Eustis of Philadelphia, and expressed the earnest desire of the Board for me to take hold of the work. I repeated my statement to Mr. Eustis in Philadelphia, concerning my unfitness for the job, my lack of desire for the position. . . . I was still more strongly antagonistic to accepting the position. . . .

"I found myself in a very embarrassing position. I was an army officer, therefore subject to orders. If this was a military duty which the President desired me to take hold of, there was nothing for me to do but accept. I had telegraphed Mr. Tumulty, asking for an appointment with the President, and if I could secure it I would lay the facts before him. We parted.

"I went to the White House to see Mr. Tumulty, who stated that . . . the President could not see me but expected me to take hold of the work, as I was subject to orders and he had decided that this should be my task in the war. I then called upon

[1] As a matter of fact, Mr. Stevens did not become vice-chairman until after the resignation of Mr. J. B. White on July 24, 1917.

Denman, told him the predicament in which I found myself, and told him that since I was obliged to take hold of it some arrangement would have to be made by which I would be given full control, without any interference so far as the construction was concerned by him or the Board. He then discussed the creation of a corporation authorized by law which would enable work to be carried on according to the usual commercial methods of business corporations and without the usual red tape of Government methods and Treasury accounting; the corporation was to be named The Emergency Fleet Corporation. Under the law the members of the Shipping Board became directors of the Corporation and the Chairman of the Shipping Board its President. As the scheme approved by the President contemplated the concentration of authority and control in the hands of one man, it was arranged that the by-laws of the Corporation should so provide, and the General Manager be the designated official. The General Manager was also to be made Chairman of the Executive Committee, the meetings of the Board of Directors being held annually. The articles of incorporation were drawn up. I became a Director, its General Manager, and Chairman of the Executive Committee, with the right to appoint the other two members."

"The ship-building job," he wrote from New York on April 19th to George—now holding his father's old position as instructor in P.M.E. at West Point, "is a bigger undertaking than its advocates and proposers have appreciated, and as it's one, so far as the construction of wooden ships is proposed, with which I am not in sympathy, I am starting a move to change some of the numbers into steel ships if possible, only that it is so difficult to get anything done or decided.

"When I got to Washington I found the air still hot but I increased its temperature by giving them my opinion of them, from which they gathered that I couldn't serve under them or with them, and I assured them they had drawn correct conclusions. I thought that we had better start fair. The result was that a separate corporation was formed, and I am it. They intended to get the charter at once. I said I'd remain until the Corporation was formed. Nothing was done, of course, so I got behind it Monday afternoon and succeeded in forming the company on Tuesday.

"I found there were no plans, no office organization—just talk. I have a good chief clerk [1] and hold him for results in getting the office started. Had a naval architect come over Sunday and engaged him

[1] Mr. George E. Oller of Philadelphia.

to get out the plans, specifications, and bills of materials. Employed a lawyer [1] to draw up our contracts, so we have something going. I have been at it from 8 A.M. to 7 P.M., tho' I quit Sunday at 4—so I haven't seen anyone and have had nothing to do but ships."

On the same day, Goethals acknowledged the President's letter of the 11th, and reported his compliance with his wishes.

"From the consideration I have already given to the subject," Goethals wrote, "I question whether the rosy views entertained by the Shipping Board as to the rapidity with which wooden ships in large numbers may be constructed can be realized. As I infer that perhaps the possibilities have been represented to you more hopefully than the situation apparently justifies, I feel that I ought to acquaint you with my view, at the same time pledging every effort of which I am capable to the fulfillment of the duty and the accomplishment of the best and quickest results."

On April 25th, Goethals sent this memorandum to Mr. Denman:

"It is impossible to carry out the proposed program of supplying 1,000 wooden ships in 18 months.

[1] Mr. G. H. Savage of New York.

It therefore, becomes necessary to augment the fleet of wooden ships by steel ships and this can be done if steel can be secured. I am advised by Mr. Farrell of the Steel Corporation that if an executive order along the lines of the one herewith be issued that the necessary steel for the ships to be constructed by the United States Shipping Board Emergency Fleet Corporation can be provided without interfering in any way with the existing naval program. It is not necessary to call to your attention the advisability of securing steel ships instead of wooden ones if such a course is possible. I recommend that steps be taken to secure the issuance of the executive order at as early a date as practicable in order that we may proceed along the lines indicated.

"It is necessary that the Corporation have funds at its disposal for immediate use and that steps be taken to secure additional appropriations. If we are to construct steel ships as well as wood I would suggest that an appropriation of $500,000,000 be secured. It may be noted in this connection that advices from the representatives of the British Admiralty from Canada, who have had experience in construction of wooden vessels show that the average cost has been $135 per ton with a maximum cost of $147 per

ton, so that the estimates of $250,000,000 in addition to the $50,000,000 to be secured from the sale of the Panama Canal bonds would not meet the necessities for wooden ships were it possible to construct them."

The inclosed proposed executive order would have placed at the disposal of the United States the whole output of all shipyards within its jurisdiction. It was never signed.

President Wilson replied on April 27th to General Goethals' letter of the 11th, expressing the President's appreciation of Goethals' frankness and stating that he had the pleasure of learning something more of his views, the other day, through their common friend, Colonel House. On the same day Goethals wrote to Mr. George G. Baldwin, of the New York Shipbuilding Corporation: "I appreciate fully what you say concerning wooden ships. I am not in sympathy with it and am undertaking the construction because I am ordered to do so. I am making an effort to turn to steel ships, and have submitted a form of executive order which will accomplish this to the Shipping Board, with the hope that they will take the necessary action to secure its issue, but it has not yet been accomplished."

"It's been a very hard week, and I am glad that

it is over," he wrote to George on the 29th. "I presume the next one will be just as bad, but I am getting things gradually straightened out and a few more rows with the Board may induce them to keep their hands off. I stumbled onto the fact that, without consulting me, one of the members had authorized a firm in Savannah and another in Brunswick, Georgia, to go ahead with the construction of ways for which we would pay. I flew into the air when I heard of it, countermanded the order, and there was trouble, of course. In their presence I told Mr. Ludtke, who used to be on the Isthmus, that he was under my orders, that no instructions of any kind were to leave the office without my O.K., and this would be required if anyone else signed the telegram or letter. There were objections, but I told them they would stand until they discharged me or secured my relief.

"Wood[1] came over. He has volunteered his services but has heard nothing as yet, and is anxious to get over here with me. I may work him in later. What I want now is an auditor, and that position seems hard to fill, for I want a man big enough to establish an accounting system all over the country, as I'm

[1] Brigadier-General R. E. Wood, one of Goethals' cadets at the Point, chief quartermaster of the Isthmian Canal Commission under him on the Isthmus, his successor as Acting Quartermaster-General, U.S.A. Now President of Sears, Roebuck Company.

going to have a number of district offices, so as to relieve this office of a great many of the details. As disbursements will be made in the districts, I want a good system of accounting. It's a steady grind from early morn to late at night, so I have kept my nose down to the grindstone. . . ."

Tom, the younger son, almost lost his chance to go overseas with the Massachusetts General Hospital Unit under the great Dr. Cushing, because of a complicated triple play on the part of three overworked medical officers tangled in red tape.

"This was too much," their father wrote to George on May 4th, "so I went to the Red Cross and made Kean give me the papers, took them to Noble, had him approve them, took them to McCain, who said he'd put them and his commission thru at once—arranged with Mr. Baker's secretary to get the Secretary to sign the commission as soon as it came in. Yesterday I went back, got the commission, and sent it to Tom by registered mail. Don't forget in life if you want a thing done, do it yourself.

"My own job is the most strenuous one I have struck yet, and I am so handicapped by the promises that have been made to every Tom, Dick, and Harry who has lumber that contracts would be given them.

We haven't the plans. I can't get the Board to ask for permission to build steel ships as well as wood, and though I have been asking for money enough to do something, they haven't submitted their estimates, promising each day that they would do so tomorrow —and as tomorrow never comes, neither do the estimates. I have lined up the steel people for steel, Congressmen for money. Plans aren't out yet, and so it goes. I just sit and fume and try to explain to a stream of callers which starts at 8.30 and continues until 7 why we can't do anything. . . . The only bright spot in the whole situation is the support that dealers, etc., offer to help make it a success. If I can only get authority to turn to steel as well as wood and get the money, I can make things hum, but therein is the trouble. The President won't see me, *so I long for Teddy and action.*

"I doubt if Teddy gets his division,[1] for those with whom I have talked say Wilson won't permit him to go. Apparently Tom will get over and I envy him his opportunity."

The Massachusetts General Hospital Unit sailed from New York on the Cunarder *Saxonia,* May 11, 1917. It was the second organization of American

[1] General Goethals' elder son had conferred with Colonel Roosevelt about his division and had been assured a command if sanction were given for the division's formation.

troops of any kind to go to France, the first being Crile's Hospital Unit from Cleveland.[1]

"Mr. Denman and I appeared before the Senate Committee on Appropriations yesterday morning for a three hours' session," Goethals wrote on the 13th. "I refused to coöperate with him on his commandeering of all bridge shops, stopping of all industrial steel work, the taking over of all the steel output and other . . . propositions.[2] I would not agree that $1,000,000,000 was necessary, nor would I ask for any such sum. I declined to combine with him in a statement to the press denying a published article that friction existed between us, on the ground that I didn't care what the papers reported and didn't care to begin now what I had never done before—enter into a newspaper controversy. It was in that attitude that we went to the Committee. When we left, I was promised $200,000,000 for construction, with authority to contract for $300,000,000—an additional sum to take over ships (steel) now building, and we were asked to prepare legislation which would enable us to commandeer the yards. . . . I

[1] After arrival in France, the Massachusetts General Hospital Unit was attached to the British Expeditionary Force and immediately became known as their Base Hospital No. 5.

[2] Mr. Denman testifies that the Board wrote a letter to Congress on May 5th, asking for legislation that would enable the Board to stop high building construction, bridge construction, and all other forms of non-war steel manufacture. See *Hearings*, p. 3188.

had the lawyer [1] prepare the legislation, and to draft it so that I am to have supervision of the shipyards. Denman went over the legislation today, as we are to appear before the Committee again tomorrow A.M. He objected to the power being given me over the shipyards—it should be with the Board. *If* I am to have a free hand in the construction, as he announced to the Committee, and as this is exclusively a construction matter, I couldn't agree with him, and would not consider a change. It's to remain as written, but he's to argue his case before the Committee tomorrow—and smilingly suggested I'd better get my argument ready. I told him I intended to make no argument, but merely to tell the Committee how it should be. What the outcome is to be remains to be seen. I have gone ahead on steel.

"I haven't been satisfied with the job and seriously thought of giving it up, stating my reasons for doing so. Yesterday things seemed more encouraging, so I concluded to get busy on my office organization. Went after Daniels to give me Rousseau, which he promised to do, and Baker to give me Wood as purchasing officer, which he also promised. This will enable me to get rid of some of the Board's useless timber I have now around me. As the plans and

[1] Mr. Joseph P. Cotton, now Under-secretary of State.

specifications have come, I will be ready this week to go ahead."

"Senator Martin [1] called me up yesterday afternoon," Goethals wrote on May 20th, "and notified me that the bill had passed as the Committee had reported it, vesting the authority in me. I can see where the President may delegate it to the Shipping Board and thence to me, which will be O.K., provided I get it and hold it. If I cannot do that then I will just throw up the whole thing."

Written just two months before his letter of resignation, these words foreshadow the outcome with shrewd insight.

"I want to go over to New York to take up and settle my steel prices, so as to be ready to launch out on the steel ship-building program, but the uncertainty about Tom [2] detained me. . . . My present plans contemplate going over on Thursday night and remaining over. I am invited to a dinner Saturday night by the [American] Iron and Steel Institute. . . ."

Goethals did not expect to speak, but was called

[1] Leader of the Democratic majority in the Senate—a very powerful personage.

[2] The *Saxonia* was passing through the submarine zone. Goethals was seeking information of her arrival through the Cunard line, the War Department, and the British Admiralty.

on by the presiding officer, Judge Gary, and responded:

"On the principle of selective draft, I have been called again into the government service. Why I was selected, not being a shipbuilder, I don't know. I was confronted with the proposition that it was the intention to turn out one thousand 3,000-ton wooden ships in eighteen months. They were going to the wooden ship program because it was not possible to get steel, and because the wooden ships could be constructed in less time than steel, even if the steel were procurable. I found that contracts for wooden ships had been promised in all directions, but when I looked into the question of the plans and specifications of the ships that they contemplated building, there were none. When you consider that the birds are now nesting in the trees that are going into those ships, and that in order to escape or stand some chance to escape from the torpedo fired by the submarine, those ships must have a speed of not less than ten and a half knots, with a possible speeding up to eleven knots, the proposition seems simply hopeless. I have never hesitated to express my opinion when opportunity offered. Before doing so, however, I came over to see my friend, Mr. Farrell, told him the situation, and asked him if it would not be

BUILD STEEL SHIPS!

"THE BIRDS ARE STILL NESTING IN THE TREES OUT OF WHICH THEY PROPOSE TO BUILD THESE WOODEN SHIPS." GOETHALS.

THE FAMOUS ROGERS CARTOON

possible to turn to steel as well as wood. He assured me that it would be. Acting on that, I announced the impossibility of the program to which I was assigned, and asked for permission to turn to steel as well as wood. I finally succeeded in getting it.

"Fifty million dollars had been appropriated for the use of the Shipping Board to be obtained by the sale of Panama Canal bonds. No effort had then been made to sell those bonds. Money is necessary in building ships as in anything else in life. So I began a campaign for money, and as I have frequently announced that I regard all boards as long, narrow and wooden [laughter and applause], and being a firm believer in absolute authority in all undertakings, I wanted money and authority.

"My money and authority are now being discussed by the House Committee on Appropriations, and they promise that probably in ten days or two weeks I will get the money.

"After my first conference with Mr. Farrell, I had a second one, in which he promised, if I went to steel ships, to get back of me and see that my program was carried out. With that assurance, I have been before the committees of the two Houses of Congress and told them that I would endeavor to turn out in eighteen months' time three million

tons of shipping [applause], and having in mind that the shipping we now build should ultimately go into our merchant marine if they escape the submarine, the ships should be, as far as possible, of steel construction. And right here is where I want this Institute to get back of Mr. Farrell and assist me in making good that promise. The shipyards are full. I have asked for legislation which will enable us to speed up the ships which are now being constructed and prevent the shipyards from laying down any additional tonnage except for us. Other means must be found besides the shipyards if we are going to make this program, and I want to enlist the coöperation and assistance of the structural steel people and go as far as possible to the fabricated ship in addition to the built ship. I want to go even further than that. I have got to have the coöperation of the manufacturers of machinery, the manufacturers of chains and anchors, of wire cables, in fact, everything that goes to make the completed ship, and if Lloyd George's statement is true that ships are going to win this war, then everybody who helps in the production of completed ships is helping to terminate the war." [1]

[1] *Year Book of the American Iron and Steel Institute,* 1917, pp. 208-210.

This speech was widely—and not always accurately—quoted in the newspapers. His phrase about the birds still nesting in the trees inspired a delectable cartoon by W. A. Rogers, in the *New York Herald*, entitled, "What the Little Bird Whispered to the General." Goethals asked for and obtained the original drawing, here reproduced facing page 320.

"Mr. Sherley [1] came in to see me this morning to inquire wherein I was misquoted in the press," Goethals wrote George on the 28th, "and I told him in only two essential particulars: one, the press reported that wooden ships were hopeless, and the other, that steel ships were to be used instead of wood. In the first instance, I had stated that the task which I found confronting me was hopeless, and in the second, I had stated steel *and* wood were to be used. I stood by everything else. . . . Of course the newspaper men flocked to see me, but I would have word with none of them. Mr. Chamberlain, Commissioner of Navigation, and one or two others called me up to offer congratulations on my speech. Admiral Bronson thanked me for my courage in making it, and wished more men in similar positions would do likewise. Barney Baruch congratulated me

[1] The Hon. Swagar Sherley of Kentucky.

and wished his place in the public estimation would enable him to do likewise. . . . Up to date I haven't been called to account and the proposed interview with Denman hasn't materialized. . . . I was somewhat disappointed, however.

"Senator Johnson of California called up late this afternoon and said he would like to send a friend of his around to see me tomorrow. This man is a great lumber expert and confirmed my statement that the birds are still nesting in the trees, and he wanted to shake hands with me. I haven't lost anything by my move, at any rate, and it has clarified the situation."

"No person," declared Mr. Denman in a statement given out to the press on May 27th, "nor any interested group of capitalists, can draw any one of us into a controversy with General Goethals, nor do we think the General is seeking it. If all the ships that can be built within the next eighteen months are built, there still will be need for a thousand wooden ships to make good the deficit in our merchant tonnage, even though the German rate of destruction is reduced to half that established in the month of April. I do not know whether a thousand wooden ships can be built in eighteen months. There was a hope expressed that we could, and I have care-

fully avoided denying the possibility of realization of this hope. My reason for not denying it is because I do not care to have our German enemies in Berlin receive that amount of comfort. I can state, I think, that General Goethals is of the same point of view with regard to the Germans. Every attempt to make it appear that there is disruption between General Goethals and the Board is adding to German assurance.

"We believe that the committees of Congress, and not a public dinner, with the head of the Steel Trust, are the places for the discussion of matters of policy with regard to ship-building." [1]

This was published in the Washington evening papers of that date. In his letter of May 28th, describing events of the 27th, Goethals observed: "Denman came up about 11, bringing a San Franciscan to see me, explained the man's business, and departed. I haven't seen anything further of him tho' the evening paper says we've settled our differences!! Of course the newspaper men flocked to see me, but I would have word with none of them."

"I saw the President on Thursday [May 31st]," Goethals told George on the 4th of June, "and broached some matters that are pending—but he

[1] *New York Times*, May 28, 1917.

vouchsafed nothing and no reference was made to my speech in any way. The Board has left me severely alone, both individually and collectively. The legislation seemed hopelessly tied up, the Senate insisting on my having control. I saw Senator Underwood and asked him to recede from the position and accept the House provision which leaves the whole matter in the hands of the President to delegate the authority to such agency or agencies as he sees fit. The Senate cannot make it mandatory on the President to give it to me, and should its provisions go through and then the President not give it to me, I would get a slap in the face that I couldn't well stand."

Later the President suggested a public statement in support of the wooden-ship program.

When Mr. F. A. Eustis first came to Washington, early in 1917, he met another young engineer, Mr. F. Huntington Clark, who was also an enthusiastic believer in wooden ships. Mr. Clark's father, Professor John Bates Clark of the Department of Economics, Columbia University, had long been an intimate friend of President Wilson. In a letter written to Mr. Eustis on November 16, 1929, Mr. F. H. Clark reveals what took place in the White House six days after Goethals' interview with the President on May

31st, besides reviewing the facts leading up to the event.

"After General Goethals arrived in Washington," he wrote to Mr. Eustis, "I had a number of interviews with him, in all of which he expressed an utter lack of faith in the possibility of accomplishing much in the way of wooden ship construction and lack of faith in their value. On one occasion he asked me if I really believed that wooden ships could be built which would be of any use in the emergency. When I said that I did believe this, he said I should have his job because he did not.

"The first effect of this attitude was in his sending notices to a number of shipbuilders who had started work, as authorized by me with your approval and that of Mr. Denman, telling them to stop all work until inspectors could be appointed and located on the work. These shipbuilders came to Washington in great distress as they were losing their men and had incurred obligations which promised to ruin them if the work should not go on. Two or three of them told me that General Goethals told them that you and I had no authority to enter into the contracts. The most serious phase of this situation was the fact that our skilled shipbuilders, of whom we had a very limited number were being scattered.

"While affairs were in this state the Goethals-Denman controversy was at its height, and apparently the principal efforts of both men were concentrated on securing control of the situation. During this period many responsible contractors made offers to build ships, but their offers were not given consideration and work was at a standstill, or nearly so, in many shipyards.

"About this time the British Mission came to Washington and one member of the Mission, who I understood was Secretary to Mr. Lloyd George, came to my office stating that Mr. Lloyd George had asked him to call on the engineer in charge of the work to get details as to what was being done. The Mission had just had an interview with Mr. Denman and Mr. Goethals,[1] and had been assured that work was progressing rapidly. I told him exactly how matters stood and at the same time he gave me some very alarming figures as to submarine sinkings, which had not been made public. I suggested to him that in a coming interview which the Mission was to have with the President, that he give him the facts of the case, and I later discovered that he had done so.

[1] "Washington, May 21. The shipping situation was discussed by Mr. Balfour today . . . with Chairman Denman and General Goethals." —*New York Times,* May 22nd.

"A number of shipbuilders had been haunting my office in desperation, as they had been warned to take no work other than government work and the work for which they had prepared had been stopped by General Goethals. It seemed to me that something must be done. My father happened to be in Washington and suggested an interview with the President, so I secured an appointment for both of us and we had a long talk over the situation. I outlined the status of affairs as mentioned above. President Wilson said that he was aware of these facts and deeply concerned by them; that he was thoroughly disgusted with the squabble between Goethals and Denman and it made him feel like displacing both of them; that General Goethals was very strong in Congress and with the public; that the public believed with the General in charge, ships were being built as rapidly as possible, and, further stated, that if he should displace General Goethals without giving Congress and the public some reason, that it would be attributed to the politics involved in the Goethals-Denman controversy, and he asked if you and I would take the facts which I had given him and publish them as widely as possible. To this I replied that we would at once resign and make the statements

he suggested. But, the President thought it would be more effective if we made the statements while still connected with the Emergency Fleet Corporation. The following day we called in the reporters and made the statements which were very widely published.[1]

"The objects of these statements were first, to arouse the country to the urgent need of rapid ship construction to make them realize the possibility of losing the war if this construction were delayed. Second, to bring about a public realization that construction was not going on with anything like the rapidity it should be. With these facts before the public, we hoped that public sentiment would be behind the President in any action which he might take to speed up the work."

The responsibility for this action and its consequences rests, therefore, upon President Wilson. That his two agents were actuated by sincerely patriotic motives and felt that they were sacrificing themselves to serve the President and the country cannot be doubted. Out of respect to his memory, Mr. Clark and Mr. Eustis kept silence for twelve years. Mr. Eustis considered going to General Goet-

[1] In the daily press of June 8th, under the date line of June 7th. That would place the date of the White House interview as June 6th.

hals and justifying himself, but waited too long; before he could make the attempt, Goethals had died. Mr. F. H. Clark confided the whole story in July, 1917, to a man who promptly repeated it to William H. May. The memorandum that May drew up, signed, and submitted to General Goethals on July 27, 1917, was filed without comment, but left a clue easy to follow up.

The statements made public by Messrs. Eustis and Clark on the afternoon of June 7, 1917, made a front-page story next morning. "There had been a general feeling among those on the outside that the row over the ship-building plan had been smoothed over, that General Goethals was going to have his way unmolested, and that the steel ships would be the feature of the program without further controversy." [1]

An official estimate given out on June 4th by the Lumber Commission of the Advisory Commission of the Council of National Defence had placed the number of wooden cargo ships to be constructed by the Emergency Fleet Corporation during the first eighteen months at 250. General Goethals was also quoted in the press as having declared before a com-

[1] *New York Times*, June 8, 1917.

mittee of Congress that the wooden-ship program would be cut down to about 200.

"The wooden-ship program has been cut to about one-fifth of its original size," said Mr. Clark in his statement. "Apparently to make room for steel ships. It is possible to build of wood 2,000,000 tons more than are at present contemplated without in the slightest degree interfering with steel construction. A crisis in shipping will arrive by December 1st. . . . Very few steel ships can be produced in time. . . . The plan of fabricating ships of structural steel is a splendid one and it will succeed, but it is new, and unexpected delays will be encountered in carrying it out. On the other hand, the wooden ship is as old as civilization and there are no uncertainties regarding its construction. . . . The standard design is difficult to build, requires a high percentage of skilled ship-carpenters, large timbers, and much hand labor."

The standard design was the one preferred by Mr. Ferris over the Hough type—although he had agreed to the construction of several under the direct supervision of Captain Hough. Defending the Hough-type ship and the cost-plus contract, Mr. Clark concluded: "In this race of construction against destruction, we can afford to overlook no material nor

design which will increase our output of cargo-carrying craft." [1]

Mr. Eustis said: "We are at war. . . . We all prefer steel ships to wood. But the emergency is still with us. We need all the ships we can possibly build . . . Wooden ships fit for the emergency can be built quicker than steel ships and without interfering with steel ship construction."

He gave out a list of contractors who had promised to complete 496 wooden hulls or ships within twelve months; 786 in eighteen months. "Entirely in addition to these contractors," Mr. Eustis concluded, "we have about seventy-five wooden ship builders on our two coasts who can produce some hundreds of ships. The question remains, how much of this emergency construction shall we, as a nation, undertake. I do not know what action the Emergency Fleet Corporation will take. The country should know what are the possibilities." [2]

Mr. Denman "asserted that he had no knowledge of the Eustis-Clark statements until they were submitted to him by newspaper correspondents. Mr. Denman placed responsibility for the statements entirely upon the men who issued them, and respon-

[1] *Ibid.*
[2] *Ibid.*

sibility for the ship-building programs, wooden and steel, upon General Goethals. The latter, he said, had been invested with full and unquestioned powers when made general manager of the Emergency Fleet Corporation, and had not been hampered and would not be hampered in any way by the Shipping Board." [1]

Goethals' reactions are given in his letter of June 10th.

"Another row has culminated and has spent itself. . . . Thursday, just before 6 o'clock, I heard a crowd in May's room clamoring to see me, and heard him say they couldn't. After it subsided, May told me that Eustis and Clark had given out statements attacking me. The telephone operator wouldn't obey instructions not to disturb me, so I had little sleep until after two. I read the statements and their talk the next morning in the papers. I refused to say anything to the reporters, but when I reached the office I sent a memorandum to Mr. Denman which was given out by him or one of the culprits and which was published in full, so you have seen it."

Utterly unaware of the motives actuating the "culprits," Goethals wrote to Mr. Denman:

"The usefulness of these two gentlemen in this

[1] *Ibid.*

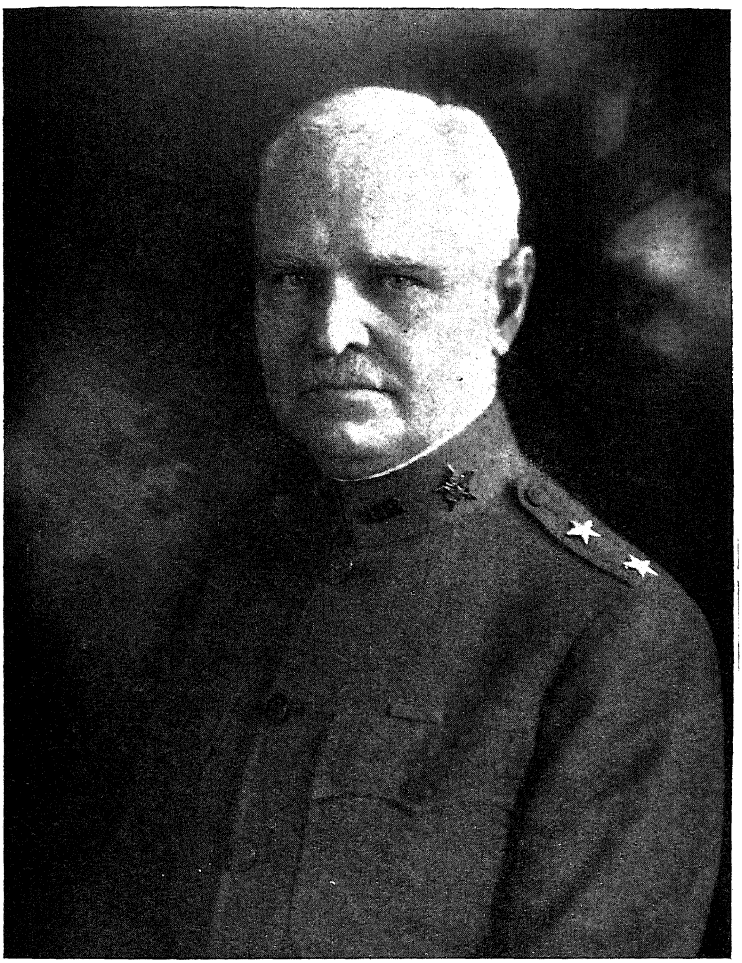
organization is at an end. Mr. Eustis was retained at your suggestion and given a position of responsibility. How he has fulfilled his duties his statement to the press discloses. Under the circumstances, I am accepting the resignation of Mr. Eustis as a member of the Executive Committee of the United States Shipping Board Emergency Fleet Corporation and discharging him from the service. . . . This applies to his employment with the Corporation, and of course has no bearing on the dual position he occupies as agent of the Shipping Board. Mr. Clark is to be dismissed from the service for similar reasons."

The fact that the Board did retain Mr. Eustis of course seemed to Goethals proof that the Board was attempting to force his resignation. "I know I am persona non grata," he wrote to his son, "but they cannot get rid of me, try as they will. They haven't the sand to fire me and make the issue, and I am not resigning.

"I have been spending the day writing a letter to the President setting forth just what has been accomplished in the last two months, and the program that I have lined out for getting the tonnage desired, and in the limit of time. I also set forth, based on the contracts let, the time in which the wooden ships can be turned out and likewise steel ships, the rela-

tive cost, and call attention to there being no comparison in the commercial value of the two varieties. I'm in hopes that he will give it to the press. I sent this with two objects in view: one, to set his mind straight on the matter, and the other as an entering wedge to get the authority delegated to me for the construction work instead of to the Board. The bill wasn't adopted by the House, but was sent back to conference. I had the lawyers prepare an executive order delegating to me the powers vested in him for all matters relating to construction. As soon as he signs the bill I'm going to send him this executive order and request his signature. He's got to do it or turn me down. Of course the Shipping Board know nothing about my program and haven't any of their own, so as far as preparation is convincing, in this scramble for authority, I have the vantage, tho' I may not get it, for it depends on the President."

The letter in which Goethals reported his progress and presented his program is dated June 11, 1917. It fills five and a quarter pages of single-spaced typing. Expounding very clearly how "The art of wooden ship-building is a thing of the past," while the scarcity of labor prevents the expansion of the existing steel shipyards, Goethals says: "The 'fabricated' ship, using structural steel employed in



MAJOR-GENERAL GOETHALS AS ASSISTANT CHIEF OF STAFF AND DIRECTOR OF PURCHASE, STORAGE, AND TRAFFIC, WORLD WAR

bridges and buildings, together with the forces engaged thereon, held out possibilities of increasing the tonnage, and though the representatives of the shipyards did not look upon the idea with favor at first, the sentiment has changed. . . . Mr. Sutphen of the Submarine Boat Corporation . . . coöperating with Mr. Worden of the Lackawanna Bridge Company, took hold of the proposition, and, after investigation, they have become so enthusiastic over the project that they are ready and anxious to begin on a program by which they anticipate producing two hundred 5,000-ton steel ships, complete in all details, in eighteen months. The idea and enthusiasm have so spread that the Chester Shipbuilding Company and the New York Shipbuilding Company also have become interested. . . ."

This report, which has never been published, goes very fully into details, lists 104 ships already under contract, recommends the taking over all commercial ships then on the ways, so as to distribute material when and where it was needed, by considering the different yards as component parts of a whole, and argues very strongly against the cost-plus form of contract. No reply to it seems to have been received by General Goethals.

"Denman and I presided at a meeting of the

representatives from the various shipyards which was called for Friday morning," Goethals wrote George on Sunday, June 17th. "The first time we have met for many days. He didn't know what the conference was for, so he concluded to let me hold forth. I announced the intention to take over all the ships under construction, that this was necessary in order that ways may be cleared to undertake our shipbuilding. I know Denman wants to leave ships for American corporations to them, but this I have not favored. So I gave my reasons for taking *all*; there was a general murmur of assent, so Denman didn't peep.

"Friday evening, just as I was leaving to go up to dinner, I was handed a letter from Denman who returned a contract for 10 steel ships which he couldn't sign. I had bought a small lot of steel for some California yard at 4¼¢ per lb. for plates & 3¾¢ per lb. for shapes. I haven't been able to fix a satisfactory price for steel so all other bidders were told to figure on 4¼¢ for plates & 3¾¢ for shapes, the contract providing that should a lower price be arranged we'd get the benefit of it, if a higher, we'd pay. This contract which he declined to sign was on this basis. In his letter he animadverted on the excessive price of steel—what a mistake it was, how he would have

protested before the Committee of Congress, etc. He invited an argument, and said he'd consider no higher than 2½¢ for plates. It makes no difference what the basis is, just so we protect the price. I would enter into no argument. I had the contract rewritten using his basis, and returned it to him. Then I wrote the Council of National Defence sending Denman's letter and asking the steel prices be fixed without delay, as the steel ship-building was being tied up. I am not going to be held responsible for steel prices and fortunately in my letter transmitting the order I lay before the President the necessity for definitely fixing the prices."

This statement is borne out by that letter, written June 15th, in which Goethals said to President Wilson:

"The next to the last paragraph of the proposed Order relates to the cost of material entering into the construction of ships, a matter which has given me some concern. Arrangements have been made with the Lumber Committee of the Council of National Defence for lumber for our wooden ships so far as fixing a maximum price at which it can be fixed is concerned, but no arrangement has yet been made for definitely fixing the price for steel, though purchases have been made for some of the ships

under contract. The Council of National Defense has also appointed a committee to fix the prices of materials of all kinds, and the work of ship construction should secure whatever advantages may result therefrom. If a central purchasing agency is established, as I have been informed is under advisement, I should be very glad to avail myself of its facilities in making purchases for the Emergency Fleet Corporation."

Goethals' prompt acquiescence in changing the tentative price of steel as suggested by Mr. Denman's letter of June 15th is noteworthy. In that letter, a copy of which is in the Goethals files, Mr. Denman evidently used the "long ton" of 2,240 pounds in figuring the price of steel plates at $95.20. In spite of Goethals' immediate revision of the contracts, and the common usage of the "short ton" of 2,000 pounds, Mr. Denman gave out a statement to the press in which he was quoted as putting a "ban on $95 ton ship steel."

"I shall sign no contracts at that figure," said Mr. Denman. "The price is absurd when the navy is getting steel at $30 a ton less. . . . I feel that we would embarrass the committee (of the Council of National Defense) if we were to embody in contracts now Gen. Goethals' tentative agreement with the

steel men for $95 a ton, because in so doing we would give respectability to a price which on its face is absurd for the government to contemplate." [1]

"As I think I said in my last letter," Goethals wrote George on June 23rd, "I used $85 a ton as a basis, not as a fixed price. . . . I have kept my mouth closed, deeming that the wise course, for only by results can the whole situation be viewed."

In his letter of June 15, 1917, to Goethals, Mr. Denman had declared: "I am aware that your entire program with Congress is based upon 4¼¢ a pound, or $95.20 a ton for steel," but cited no further ground for that belief. In his testimony before the Committee of the House in 1920, about this matter of the ten ships—*not* the entire program—to be built by the Downey Shipbuilding Corporation, he said: "Now, as to this Downey contract, I requested that the price be changed to 2½ cents, which the general did immediately. So the Downey contract was signed with the amount changed from 4¼ cents to 2½ cents. . . .

"Now, the basic price for steel plate was something that did not concern the Downeys or the parties to the contract, because it was provided in the contract that if the steel plate cost more we absorbed the increased cost, and if it cost less we got the benefit

[1] The *Washington Post*, June 18, 1917.

thereof. The point that I made with Gen. Goethals was that 4¼ cents appearing as the tentative basis was a very bad bargaining point for us when we sat down with the steel manufacturers.

"Mr. Gary later offered me all the plate we needed at 3 cents a pound." [1]

What General Goethals did to expedite the construction of fabricated steel ships was expounded in a memorandum drawn up on July 25, 1917, by one of the Fleet Corporation's lawyers, the present Under-secretary of State, Mr. Joseph P. Cotton, who said, in part:

"The idea of standardizing steel ship construction to obtain speed in construction has been suggested many times. The difficulties lie in applying the idea to the existing situation. The more important American shipyards for construction of steel ships were, in May, 1917, all in some degree engaged in Navy work, and had contracts for construction of steel ships for a long period in advance. Any attempt to accomplish at once results in steel-ship construction by standardization of material and methods in the existing yards on a large scale would imperil the Navy work and be likely to disorganize the immediate work of the yards to an impossible degree.

[1] *Hearings*, p. 3180.

Also the idea of standardization was foreign to existing ship-construction methods, which in many yards are very old-fashioned.

"The problem was then how to accomplish the result outside the existing yards and it was in the solution of that problem that General Goethals' service lay.

"As recounted in his testimony on July 18, 1917, before the Shipping Board, his experience on the Canal had shown him the ability of the bridge-work fabricators and erectors to do satisfactory marine construction on the Canal locks. He, therefore, set about to ascertain first if there was existing steel fabricating capacity among the bridge and tank plants, and if they could be organized for that purpose. It was early obvious that only a comparatively small proportion (say 30%) of the total output of the several fabricating plants could be put in immediate use for this purpose and, therefore (as the total capacity was thus limited), the trade as a whole would have to be organized to coöperate in the work and competition among the mills could not be depended on."

Describing how Goethals got in touch with the Submarine Boat Company, the Chester and the New York Shipbuilding Company, with their affiliated

bridge companies and fabricating mills, Mr. Cotton continues: "Realizing the need of speed and the danger of crossing wires, General Goethals got these three organizations working together. . . . Coincidentally, Mr. Ferris[1] took up the work of making plans for a standardized ship—*i.e.*, a ship so planned as to eliminate refinements and to simplify construction, of which the parts, so far as possible standardized, could be fabricated away from the shipyard and there assembled and put together. On July 1 he produced a ship plan for a 5,000-ton ship. In the same time the New York Shipbuilding Company, working under Mr. Ferris' direction, had produced a plan for a 7,500-ton ship. . . . In the same period the bridge-builders had become convinced of the feasibility of their share of the work. By July 4th, when the President's order came down, working plans had been prepared for three assembling shipyards at Bristol, Hog Island, and Newark Bay.

"Shortly before July 4th, General Goethals called a conference of the fabricating mills in order finally to line them up and the contractors were then asked to prepare rough material estimates of the larger

[1] Mr. Theodore Ferris, dean of American naval architects. Goethals brought him to the Emergency Fleet Corporation as soon as it was organized, and as its architect he designed both the "Ferris type" wooden ship and the fabricated steel ships mentioned above.

items of construction material. . . . In the carrying out of the project it is practically necessary that a special fast freight service be established from Pittsburgh and Chicago to the mills and the assembling plants. This portion of the project was taken up by General Goethals with Mr. Willard and Mr. Harrison (under the Council of National Defense), who are ready to establish such a service, provided it can be arranged that there shall be no car detention at plants or mills. This was provided for in plant layout. Thus by July 1 the project was rounding into shape on all sides. But neither at that time nor later was it clear what the project would cost. . . . The general material estimates covering large items were submitted to Major [R. E.] Wood to see where he could help. The largest of these contracts were with Babcock & Wilcox for boilers, and General Electric, Allis-Chalmers, and Westinghouse for propelling machinery, and prices were discussed. . . . In all this practical work the proposed contractors had taken the leading part and done most of the work under the general supervision of General Goethals.

"The question of price had been only generally discussed before July 1. General Goethals had told the three concerns that he wanted a lump-sum bid

from each. . . . A draft contract (with figures blank) was drawn up by the American International Corporation lawyers on these general lines which General Goethals' lawyers refused to recommend. It was unsatisfactory also in details.

"On July 6, on reconsideration, it was decided that a new basis should be adopted, turning the contractors into government agents for a fee, and a short draft contract was prepared along these lines. The general scheme was to make the contractors government agents who should take no financial risk, but furnish an organization to take charge of the works. . . . As soon as it was decided to go from the lump sum basis to the agency basis, both contractors and the corporation stopped working on the cost estimates, as under the agency basis, these detailed estimates were quite unimportant, inasmuch as each obligation of and all acts of the agents had to be approved as the work progressed.

"One of the prime reasons for moving to the agency basis had been the difficulty of making any estimate which would be close enough to depend on. It had been the opinion of Mr. Ferris from the start that any estimate would be unreliable (with green labor and shipbuilding going on before the plant was done and no organization), would be very high, and that

they would get lower as the work went on in the second year. . . ."

Congress passed the War Budget Bill on June 15th, but the President deliberated for nearly a month before deciding to sign the executive order submitted by Goethals [1] or the one prepared by the Shipping Board. On June 22nd Goethals had an interview with President Wilson.

"I hadn't heard anything about the report I made two weeks ago, Monday next," he wrote George on the 23rd, "so I launched into a full outline of my program, and for the first time he evinced enough interest in the subject under discussion between us to ask a number of questions, so that I straightened out a variety of matters and impressions. In this respect it was the most satisfactory interview I have ever had. . . . I never mentioned Denman, didn't argue or ask for the authority to be placed in me. I had written him about the latter and it would be infra dig. for me to take it up. We parted."

Goethals went ahead with his plans for fabricated steel ships.

"Today," he told George on July 2nd, "has been a very busy one, for it has been a day of conferences with the representatives of the fabricating mills, ar-

[1] On June 15th, as soon as the President signed the Act.

ranging so as to distribute the material for the fabricating contracts. This was very satisfactory. Then I had the representatives of the companies who offer to take up the fabrication of ships, arranging details so that the contracts can be drawn up ready for execution in case the President gives the word. . . .

"Mr. [Raymond B.] Stevens gave me the information that the Shipping Board sent in a recommendation to the President advocating that three hundred million of our appropriation be set aside for the construction of wooden ships, and recommending that the authority be vested in the Emergency Fleet Corporation. As the Shipping Board controls all the stock, this would be tantamount to the authority being vested in the Shipping Board. Their recommendation on the money end of it, if the President would only realize it, is an admission that 1,000 wooden ships cannot be built."

The correctness of this prophecy is proved by the following authoritative summary, printed beneath a picture of a wooden ship, opposite page 54 of Mr. Hurley's *Bridge to France*:

"703 wood ships were contracted for; 214 of these contracts were canceled when the Armistice was signed; 323 of the balance were completed; 44 sold; 23 lost, and in 1922 the wood ships built for war pur-

poses were considered obsolete—256 of them being sold for scrapping. 265 carried cargoes overseas."

"I presume, however, that he won't think of it," Goethals continued. "I heard that this letter went forward this A.M., so I sent one over this afternoon telling him what we had done toward obligating our money, and showing that the balance was only sufficient to take care of our fabricated ships, which I asked him to take up at once, and calling attention to the proposed Executive Order which I had sent him on the 15th ult. If the paper of a week ago today was correct, that he was waiting for additional information and the Shipping Board has been collecting data, I presume he has the necessary information to decide the matter, so action *may* be taken at an early date. If it weren't war-time, I'd get out and say a few things."

On July 11th, President Wilson signed the executive order prepared by the Shipping Board, vesting all authority for the construction of ships in "The United States Shipping Board Emergency Fleet Corporation." At the same time he wrote to Goethals, saying that he had concluded that the original arrangement ought not to be disturbed, that this would not in any way hamper Goethals' activities, that everybody was willing and anxious to con-

tribute to the completion of Goethals' program, and assuring him that the directors of the Emergency Fleet Corporation shared the President's desire that Goethals should not in any way be hampered. Therefore the President was signing the executive order requested by the Shipping Board upon purely business reasons.

Goethals wrote to Denman on Friday, the 13th, announcing his intention of starting, on Monday, construction to complete his full program. In addition to 425 ships of all sorts, already under contract or for which contracts were being negotiated, he would offer contracts for the construction of two government-owned plants for producing 400 fabricated steel ships of standard pattern, and also he proposed to commandeer all ships then under construction for private account. This program he gave to the press.

On the same day Mr. Denman replied: "There seems to be some misapprehension as to the order of the President. The wooden ship program as originally outlined, as you will remember, is his program, and I take it no modification of it is to be deemed other than his program. Since he has designated the Corporation in the manner that you are familiar with as the body to assume responsibility for it, I deem it

a proper respect to him would require a joint deliberation over the proposals you have made. Will you kindly send me a copy of the proposed contracts for fabricated ships, and also your reasons for your change with regard to a lump sum method of construction. Neither the Shipping Board, which owns the majority of the stock of the Corporation, nor the directors, have been advised of any change in this particular. While it may be quite advantageous, it would seem well to have deliberation upon this subject.

"Very faithfully yours,

(Signed) WILLIAM DENMAN,

President."

Still on the same day, Goethals quotes the President's assurance that he will not be hampered and asks, "Do I understand that you do not desire me to take preliminary steps in this program on Monday?"

In a very long letter on the 14th, Mr. Denman wrote: "When you were first employed by the Emergency Fleet Corporation, we promised to lend every energy and assistance we had in carrying out the program the President had then decided upon. It was for a large fleet of quickly constructed wooden vessels to supplement the output of steel. Since then

you have had that assurance repeatedly from us, and we are ready to give you such assistance in carrying out any program *that has been decided upon.*[1] This does not refer to a program that has not been decided upon by the Corporation to which the President in his recent Executive Order gave the responsibility and power for its execution."

In a letter of the 15th Mr. Denman wrote: "I shall have in your hands early tomorrow morning a letter requesting certain information for the meeting of the Board of Directors of the Fleet Corporation. Will you please see that no action is taken regarding commandeering any yards or contracts, or any agreements for government plant till the Board meets. In this the control of the stock of our company agree."

This command raised the fundamental question, as Goethals pointed out in a letter to Mr. Denman on July 16th: "whether the final decision in regard to the conception and carrying out of the shipbuilding program is to rest with the Board of Directors of the Emergency Fleet Corporation or with me. Now that the question is raised it should be settled immediately.

"When I undertook the work, it was recognized that its nature required a single executive, with full

[1] Italics in the original.

responsibility, and when we appeared before the Congressional Committee you stated that I was to be in full charge. That I understand to be the President's meaning in his letter to me, which reads as follows:"

Quoting the passage from Wilson's letter of July 11th, promising that Goethals' activities should not be hampered and that the directors share the President's desire, he continued:

"Your position is that since technically the President gave the authority to the Emergency Fleet Corporation, I am, in carrying out my program, to take orders as an employee from the directors of that Corporation. Whatever argument may be made about it, the fact is that if you stop my present program and require me to justify every detail, as you do now, I shall be seriously hampered in the building of ships. Any substantial modification of my program would probably mean its destruction and another delay would occur while a new program was being formulated and agencies found to carry it out. I am entirely willing to confer with you and your board of directors, and take under consideration any objections or suggestions you or they may make. But as regards the practical problems of building ships, my impression frankly is not that I am to assist the directors but that I am to do the work and am

free to call upon the directors for their advice. . . . I advise that every question of personality between us cease. I think the only way is for us to meet at once and see if I cannot convince you that I am right. Our differences are interfering with a national work."

On July 16th, Mr. Denman answered: "We have been and always shall be glad to discuss with you at any time any questions of policy, but we desire the information referred to in our letter of this morning to be in the usual form of your communications to us in response to our similar inquiries, that is to say, in writing. Please let us have it, or describe such portions as you cannot let us have.

"As I have said, it should not have taken two hours to prepare it. It will cause no substantial delay. We do not intend to be rushed into an acceptance of a program you say you have been weeks in preparing, without knowing the general facts we have requested, particularly about the cost of the ships. . . . We hope to help our General Manager further, but ask him for the essential facts in writing which were requested in our letter this morning. These were not concerning 'every detail,' but on the lines of broad policy. It is true you are to build the

ships, but the Board of Directors, which includes you, should determine policies.

"We think that in stating this morning that your program was being delayed, you should in candor have given our requests and reasons with it. There is no privilege in our correspondence, and you are entitled to do as you will with this letter and that of this morning.

"Very faithfully yours,

WILLIAM DENMAN,
President."

Mr. Denman's testimony before a Committee of the House of Representatives on December 13, 1920, is interesting in this same connection.

MR. DENMAN. We both detested the idea of wooden ships. We knew they were obsolete. Gen. Goethals—and I think I will not hurt his feelings in saying it—is not a diplomat, and he expressed his disgust, as I did on many occasions, and certain of the journalists I think received the impression that his dislike for that type of ship for commercial purposes was addressed to the project of building them for war emergency. As a matter of fact, I was under the impression that he had said to various

men that he did not want to build wooden ships, and later, after I left the Board, the explanation came out that he had said that, but he was referring to the fact that he did not want to build them with commercial use in view. But from the first of June until we left there was never the slightest flicker of difference between Gen. Goethals and myself on the project of building as many wooden ships as we could.

THE CHAIRMAN. Did you have any controversies with him over the matters which may have been the cause for his resignation?

MR. DENMAN. The real difficulty that arose between the general manager and the Board—and it was not between Gen. Goethals and me, but between Gen. Goethals and the Shipping Board—arose out of the division of authority that was made by the President. In the month of June there was the question in the President's mind as to whether or not the entire building program should be given over to Gen. Goethals as general manager, or whether it should rest with the Fleet Corporation—that is with Gen. Goethals as general manager or any successor to the General as general

manager. The President decided, in accordance with the suggestions of the Shipping Board, that the power should rest in the Emergency Fleet Corporation as a corporation and not in the general manager as an individual. General Goethals, despite this, assumed that as to the responsibility for the program of building ships it was upon him, and the Board as directors of the Emergency Fleet Corporation knew that by the terms of the order they were responsible to the Congress, and that they would have to account for their expenditures, and also make the applications for money.

The Hog Island enterprise was then being drawn together by Gen. Goethals and the Board insisted that the General take the matter up with them and explain with some outline that would be comprehensive, just what the Hog Island project was, so that we could outline to the Congress and appear before your committees here and get our appropriations. Now, Gen. Goethals did not want to waste the time of talking with us—and I can sympathize with him, because, gentlemen of the

committee, board management is not efficient for rapid business, and we were debating during the period of a week prior to our resignations the provisions of the proposed Hog Island contract. That was the dispute, if you may call it that, that was the immediate preceding incident to the request for resignations. *There was nothing about wooden ships in it.*[1]

On the following day, December 14, 1920, in the same caucus room of the House Office Building, the subject was taken up again by another member of the Committee, between whom and Mr. Denman there was the following dialogue:

MR. CONNALLY. It was all a myth about the difference of opinion between you and General Goethals on the policy of the Board?

MR. DENMAN. On wooden ships; yes, sir.

MR. CONNALLY. What was the difference between you and General Goethals?

MR. DENMAN. We are entirely agreed on the Diesels.

MR. CONNALLY. I did not ask you about Diesels. I am satisfied you convinced him about Diesels. But what was the difference between you and General Goethals,

[1] *Hearings*, pp. 3189-3190.

which, perhaps, resulted in the resignation of both of you?

MR. DENMAN. I think the thing that focused public attention at that time was Hog Island.

MR. CONNALLY. In what respect? Were you in favor of Hog Island and he against it, or you against it and he for it?

MR. DENMAN. Both of us were strongly in favor of building a fabricating steel plant.

MR. CONNALLY. There was no point of difference between you there?

MR. DENMAN. No. I was in favor of having a very full and complete statement of the anticipated cost, and very careful planning as to the anticipated project, before we got into it. General Goethals' idea, apparently, was to take the services of this group of men in New York that had prepared for him an outline of cost and develop the project as he went along. And we were discussing that matter between us, and I think the General—although it is not for me to explain what was in his mind, but my impression was that General Goethals thought that this was the beginning of a series of invasions on his administration that would hamper his activities. And if it had been he was

right in resenting it, because he should have been in charge of the job, and we should not have interfered. Now, it was not our intention to do that. That was pending, and while it was pending, the papers were filled, from one end of the country to the other, with articles about "The dispute between General Goethals and Mr. Denman; and Mr. Denman desiring to build wooden ships, and General Goethals desiring to build steel ships, and wood being the character of Mr. Denman's head, and steel being the character of General Goethals' resolution." That was the picture in the press at the time.

MR. CONNALLY. Yes, we recall it. Now, how far did this difference between you and General Goethals proceed? You wanted an estimate of cost and such an estimate was made out, wasn't it? And didn't you refer to it in your testimony as $22,000,000?

MR. DENMAN. Yes; and it reached me on the day or the day before we resigned.

MR. CONNALLY. The estimate?

MR. DENMAN. Yes.

MR. CONNALLY. So then there was no trouble about that, because you had your way about

that? General Goethals did not object to this, did he? I just wanted to press this controversy matter enough to see how it eventuated.

MR. DENMAN. That was all. I never had any feelings that the Hog Island dispute would not be resolved amicably; that all the alleged differences, if there was a difference in the General's mind as between us, would not be resolved. I have dealt with a great many men, not as great as General Goethals but of commanding power, and have had no difficulty in contact of that kind.

MR. CONNALLY. Well, really it never came to a controversy at all? It was only a difference of opinion, which did not result in hurting your feelings, did it?

MR. DENMAN. General Goethals was very determined that we should not invade his power of administration. Now, there were persons who utilized those reports of differences, who, I am told, appealed to the Council of National Defense, and quite likely appealed to the President, though I do not know that, to get rid of us, so there would be no Diesels and no Mr. Denman and no General Goethals, and a new crowd would come in,

and with their inexperience things would drift along until they got experience.

MR. CONNALLY. So they were really after the Diesels? That is the animal they were chasing?

MR. DENMAN. No; I think that was only one of the good many things. My policies on steel prices, lower freight rates, the St. Lawrence, the control of neutrals, the abolition of the fugitive-sailor law, and many other matters.

MR. CONNALLY. I believe that is all.[1]

The correspondence between General Goethals and Mr. Denman to which reference is made just preceding the quotations from the testimony before the Committee of the House culminated in a conference which General Goethals says "consisted in my being placed upon the stand in my own behalf."

"At the conclusion of this so-called 'conference,'" said Goethals in his narrative, "I drew forth a letter of instruction that Denman had sent me, read its contents and told him I would flatly refuse complying with the instructions, that they were at variance with the understanding that I was in complete control, that I was there by order of the President, that I could be dictated to by no one but the Presi-

[1] *Hearings*, pp. 3273-3274.

dent, and would maintain this position until relieved by him.

"The following day I received a letter from the President, stating that I was to place myself in the hands of the Shipping Board and do their bidding, and work harmoniously with them; that the Shipping Board was to determine the forms of contracts, the types of ships, all questions of policy relating to construction, and after these things had been determined by the Shipping Board I was to carry them out."

In this letter of July 19th the President does not speak of the Shipping Board, but of the Directors of the Emergency Fleet Corporation, who were those same five gentlemen, plus Goethals himself. Also, the President refers very specifically to wooden ships. He declares that although it is not possible, in Goethals' judgment, to procure wooden ships driven by powerful machinery, that would be seaworthy in transatlantic commerce where high speed is desired in order to secure greater possibilities of immunity from submarine attack, nevertheless it is the judgment of the President of the United States and of the Directors of the Emergency Fleet Corporation that wooden ships should be built in considerable numbers for that part of the sea-going trade that

will not in all probability be exposed to submarine attack. The Directors are of course free to carry out the program for the wooden ships in some other way than was at first contemplated. Finally, the President makes the suggestion—equivalent to a command—that no further resort be made to the public prints.

"This," declared Goethals in his narrative, "completely reversed the position previously taken, it changed my status, and as I felt I could not do the work efficiently under such circumstances and with such handicaps, I wrote the President and stated that it would be impossible for me to work harmoniously with the Shipping Board, that I realized the concentration of authority and responsibility in one man was the only way in which satisfactory results could be secured, and since I was not the one to whom these could be given, requested that some one else be selected in whom such authority and responsibility could be vested, and that I be relieved. In view of my letter, he accepted my resignation and suggested to Denman that he do likewise."

Goethals' letter of resignation, dated July 20, 1917, follows in full:

"MY DEAR MR. PRESIDENT:

"I beg to acknowledge the receipt of your letter of July 19th, and wish to express my appreciation of

the considerate manner in which you stated the conclusions which you have reached.

"In the project for the 'Rapid Emergency Construction of Small Ships,' dated March 20, 1917, and approved by you on April 4th, last, it was stated that

> " 'to secure the speed of production, which is all important, we feel that the task of securing and equipping these ships should be put in the hands of one man. Centralized control is essential for rapid and efficient work.'

"It was on this understanding on my part that I undertook the work at your request. This understanding was subsequently confirmed, not only when I took up the matter with the Shipping Board, but at the hearings before the Sub-Committee of the Committee on Appropriations of the United States Senate, where it was stated that I was to have 'absolute and complete authority for the administration on the constructing side; that everything the Board could do would be done, and that it would act on my suggestion and initiative.' These assurances were placed much more clearly before the members of the Sub-Committee on Appropriations of the House of Representatives.

"The necessity for shipping makes it imperative

that results be secured as rapidly as possible. It is results, by whomever obtained, which count after all, and nothing should be allowed to interfere with the accomplishment of this end. I have endeavored to establish harmonious relations with the Shipping Board, but regret to state I have not succeeded, and it seems impossible to secure the unison of purpose essential to the success of the work. Believing that a centralization of authority in one man is necessary to carry out the ship-building program rapidly and successfully, after mature consideration of the whole subject, I am satisfied that I cannot secure sufficient results under the conditions of your letter. I am convinced, therefore, that the best interests of the public welfare would be served if I were replaced by some one on whom full authority can be centered and whose personality will not be a stumbling-block. It is my urgent hope that this solution will commend itself to you, and, in order that the work may be delayed as little as possible by a change, if you deem it wise, I shall be glad to continue in charge until my successor can be selected and remain with him until he has a thorough knowledge of the organization that has been built up and is able to familiarize himself with the work that has already been undertaken.

"You may be assured of my loyal acquiescence in

the directions given in your letter and all future orders."

"Very respectfully,
GEORGE W. GOETHALS."

Four days later, this was given out to the press from the White House, together with two letters of the President's, dated July 24th; one accepting General Goethals' resignation and the other requesting Mr. Denman's. The widely-circulated story, which has found its way into some histories, that President Wilson simultaneously demanded the resignation of both men, is not in accordance with the facts. The President's letter to Goethals was published in daily newspapers on July 25, 1917. It reads:

"Your letter of July twentieth does you great honor. It is conceived in a fine spirit of public duty, such as I have learned to expect of you. This is, as you say, a case where the service of the public is the only thing to be considered. Personal feelings and personal preferences must be resolutely put aside and we must do the thing that is most serviceable.

"It is with this thought in mind that I feel constrained to say that I think that you have interpreted your duty rightly.

"No impartial determination of the questions at

issue can now set the shipbuilding programme promptly and effectively on its way to completion and success. It is best that we take the self-forgetting course you suggest and begin again with a fresh sheet of paper—begin, not the shipbuilding, but the further administration of the programme. The shipbuilding is, happily, in large part begun and can now readily be pushed to completion, if the air be cleared of the debates that have unfortunately darkened it.

"With deep appreciation, therefore, of your generous attitude and with genuine admiration of what you have been able in a short time to accomplish, I accept your resignation, and feel that in doing so I am acting upon your own best judgment as well as my own. I hope that you will feel the same undoubting confidence that I feel that the people of the country, for whom you have rendered great services, will judge you justly and generously in this as in other things, and that all personal misunderstandings and misjudgments that may have been created will pass in a short time entirely away."

"I am well out of it," Goethals wrote to George on July 29th, "for I couldn't have had a successful result so there was no use trying. A month and a half ago with the steel interests lined up behind me as well as the manufacturers, we could have made a go

of it, provided there was no interference, no hampering. With the steel committee broken up, coöperation gone, the whole aspect is changed. Time, an essential item, is being lost and wasted over discussions and the sooner I get away the better. . . .

"Thursday the papers announced that I was going to France to take charge of the engineer work in connection with the lines of communication. I wish there was some foundation for the rumor, but I can find none. The President isn't going to give me anything to do, that's certain, and I am not going to ask him. On Friday I was handed a letter from the White House, and I had the hope that it was in connection with France, but it wasn't. A note, saying our crisis is past, and we may rest assured that public opinion has not been adverse to us. He concluded that the outcome was inevitable, but he sincerely admires the manly and soldierly qualities I displayed. He winds up by asking me to assist Admiral Capps until he is as firmly in my place as is possible under the circumstances."

The original of this note just referred to is dated July 25 and is in the Goethals files. His summary of its contents is very accurate. His comments are pithy; his resentment understandable.

"Of course, he is mistaken, there was nothing in-

evitable about the solution, if his first letter to me had meant what it said. He could still have saved the situation if he had decided the other way when he wrote on the 19th, or if he had centered authority after receipt of my letter of the 20th. The truth of the matter is he couldn't let me continue and make a success of the job. . . . I hear the President's first intention was to keep Denman, but his political advisers said he couldn't. . . . There was no danger of my letter of the 20th being expurgated, for I would have published it as soon as the President's letter was given out. I don't think the President's letter is insulting, as does ——; it's just his usual method of 'peace at any price.' I am more than glad that I am out of it. Denman was surprised, but it serves him right and I have no sympathy for him. Had he gotten on the band-wagon and the result had been successful as president of the Corporation he could have claimed all the glory. There is no need for me, so far as the war is concerned, unless it be one of the conscription camps, which I do not want at any price. I'd give anything to go to France, but I see no hope of that, so I'll go to road work and whatever else may turn up."

CHAPTER XV

THE SINEWS OF WAR

"WASHINGTON,
August 3, 1917.

"MAJ. GEN. JOHN J. PERSHING, U. S. A.,
Commanding United States Expeditionary
Forces, Paris, France.

"MY DEAR PERSHING:

"I have been compelled to sever my connection with the shipbuilding project, and am therefore returning to my first desire for service in France.

"Understanding there is any quantity of work of an engineering character to be done, I asked the Secretary of War that I be sent to France, under your orders, in connection therewith. My lack of training with troops could justly be taken by the army at large as a bar to command in the field; but I do not see how any exception can be made to my assignment in charge of engineering construction, in which my experience has been rather extensive.

"At my interview with the Secretary this morning,

he said that you had been cabled relative to consolidating all engineering work under one head, and, I assume, without reference to my desire to go. In consequence of this, I cabled you today as follows:

" 'Pershing,

Paris.

" 'Very desirous of taking charge under you of all engineering construction.'

"Goethals."

"I hope my cablegram duly reached you.

"If assigned to this work, I can assure you of my loyal support and coöperation, and that I will give the best that is in me toward securing the results you desire.

"Yours sincerely,

GEORGE W. GOETHALS."

"Paris, Aug. 7, 17.

"GENERAL GOETHALS, Washington,

"Deeply appreciate your cablegram. Engineering construction now under competent management and being handled with ability. Shall hold offer in mind.

"PERSHING."

Not until September 11th did General Pershing reply to Goethals' letter of August 3rd.

"It would be needless," wrote the commander of

the A.E.F., "for me to say that I appreciate very deeply your desire to serve with the army during the war. The engineering construction here is a large problem, but it seems to me that it would be unfair at this time to make a change, especially as the engineer officers, from the highest to the lowest, have shown themselves very efficient, and, I believe, entirely competent to handle the work.

"Your high reputation and ability along these lines would, of course, be a guarantee of efficiency, but, as I said above, I do not see my way to making a change just now.

"With very warm regards and many thanks, I remain, as always,

Very sincerely,
JOHN J. PERSHING."

Deeply disappointed, Goethals had returned to New York, where the engineering firm that had taken him into partnership had changed its name to "George W. Goethals & Company, Inc." On August 28th he wrote to George: "I met with the joint commission on the port of New York, last Wednesday, and tied up with them until a report and estimate of the money required can be prepared." His study of the conditions and needs of the port of New York

served Goethals in good stead when, at the end of 1917, he was unexpectedly recalled to the Army as Acting Quartermaster-General. Theodore Roosevelt sent this terse note, when he heard the news: "I congratulate you and thrice over I congratulate the Country!"

"I appreciate very much your kind note of congratulation of the 19th inst.," Goethals answered, "and I find myself in anything but a pleasant situation. When the order came, I was in hopes that I was going to take hold of the communications in France, and was hardly prepared for this. How long I am going to last here depends upon the support received and the lack of interference."

Pershing cabled his congratulations from France, and added by mail: "If anything in our army needs rehabilitation by a man of ability and affairs, it is the Quartermaster Department, and we all look for great improvement in its management."

Goethals replied that he felt he needed condolences more than congratulations. "However," he concluded, "I am going to do the best I can and trust that we will succeed in keeping you supplied."

"In December, 1917, I got a telegram from the Chief of Staff, General Biddle, that I had been restored to active duty and was to report immedi-

ately to Washington," [1] Goethals testified before a Committee of Congress in July, 1919. "I had not provided myself a uniform, but thought I had better, because a state of war existed. That caused a delay of three or four days. Then I came down to Washington and saw General Biddle, who told me that the Secretary of War wanted me to take hold of the Quartermaster Department.[2] I saw the Secretary later in the day, and agreed to take hold of it, provided he ordered me to Washington and I was to have full authority, which he accorded me.

"When I took over the Quartermaster Department on December 26, the department had been pretty badly shot up and robbed of a number of its functions. The subsistence branch was well organized and operating well, but the larger part of the purchases were made through the coöperation of the Food Administration. The purchase of clothing and equipage had been divorced practically from the Quartermaster Department, and purchases were being made by a branch of the Council of National

[1] *Hearings before the Select Committee on Expenditures in the War Department, House of Representatives, Sixty-sixth Congress, Serial I, Part 6.* Washington, Government Printing Office, 1921. General Goethals' statements have been condensed and rearranged to form a continuous narrative.

[2] Its name had been changed in 1912 to the Quartermaster Corps, but Goethals always referred to it by the old name.

Defence headed by Mr. Eisenman and Mr. Rosenwald. The appropriation for barracks and quarters had been practically divorced from the Q.M.G.'s office and assigned to a Construction Division, which reported to the Quartermaster General and also the Chief of Staff and the Secretary of War, making a rather anomalous condition of affairs. The transport service, which had been under the Q.M., had been divorced, and a separate branch of the General Staff, known as the Embarkation Service, had been set up. The various bureaus of the War Department had secured appropriations for making shipments of their own materials, and they had created certain traffic sections, handling supplies by railroad, express, or freight. The only branches of the Quartermaster Department that were really operative were the subsistence branch and the remount service.

"The personnel and organization of the department were in pretty bad shape. General Sharpe, who was Quartermaster General, had commissioned a great many of the more efficient of the old employees, with the expectation that they would continue on in the department and perform the duties they had formerly performed as civilians. The matter was brought to the attention of General Bliss, then Chief of Staff, who decided that they should be transferred

elsewhere; that they could not hold commissions and perform their old functions. No reason was assigned for that, that I know of.[1]

"When I took hold in December, 1917, the allotment of officers was pretty well filled up. I was not allowed to commission anybody above the rank of major. I could not get men who would come into the army, so I organized along civilian lines. A number of these civilians I employed were dollar-a-year men, while others were given commissions, or, by special authority of the Secretary of War, I paid them salaries. There is something about the uniform which, when a man puts it on, seems to change his entire attitude. We were a large purchasing organization, and I thought it could be handled better by civilians than by military men.

"When I came here as Acting Quartermaster General and began looking into the clothing situation, I found the condition of the wool market very serious. I found that the Quartermaster General was buying clothing; that the Signal Corps was buying clothing; that the Medical Department was buying some clothing; that the Ordnance Department was furnishing blankets, so that we were all competing

[1] Sharpe, Henry G., "This was a severe blow and greatly crippled the office," *The Quartermaster Corps in the Year 1917 in the World War*, p. 19. New York, The Century Company, 1921.

against each other. We were furnishing harness and saddles for mules, and also furnishing wagons; the Ordnance Department was furnishing saddles and harness for horses. We of the Quartermaster Department had launched the Liberty trucks, but the Ordnance Department was buying its own trucks, and the Engineers were buying their own trucks and automobiles, and the Signal Corps was buying trucks and automobiles, and paying no attention to the Liberty truck, which was being developed; all were entering into competition with one another.

"The effect was to increase prices to some extent, until we got the War Industries Board to fix prices, and until, as Quartermaster General, I secured the coöperation of the War Industries Board and commandeered all the wool. Even then there was competition between the Army and the Navy on the wool situation, and we were competing with the Post Office Department on cotton goods. I became thoroughly convinced of the advisability of a ministry of munitions. Consolidation of purchases was what I was after. I mentioned it to the Secretary of War, in the latter part of December, 1917. But the President had already come out publicly against the matter and was not in favor of such a proposition. The Secretary, of course, agreed with his superior.

"So I concluded the best thing we could do in the War Department was to bring about such coördination and consolidation of purchases as would do away with this competition. General Biddle was Acting Chief of Staff when I reported for duty. I took it up with him, and he asked me to take it up with the chiefs of the bureaus. The only one of them who seemed to agree with me was General Wheeler, of Ordnance. My scheme contemplated that the method of purchasing all commodities would be similar to the arrangement that existed in the Navy. Technical stuff, such as ordnance and aircraft, I did not care to be mixed up with, and left to those respective bureaus. But I did not see why I should not be able to purchase all classes of standard supplies and all other technical supplies to be based upon specifications prepared by the technical bureaus. Of course, I clashed with the doctors. In their view, I was not competent to buy medicines, but I claimed neither were the doctors; that they would have to get chemists, and so could I. I clashed with the Corps of Engineers, because they said I could not buy the different varieties of rope. But we smoothed out some of the wrinkles by actually taking it over by authority of General March, when he came in as Chief of Staff.

"I was very eager to bring about this consolida-

tion. I took the matter up in January, 1918, when Mr. Stettinius was ordered down to Washington, and the Division of Purchase and Supply was organized as a branch of the General Staff for coördinating the purchase of supplies as between the various bureaus. He is a member of the firm of J. P. Morgan & Company, New York, and had done the purchasing for the Allies that was done through that firm. I urged upon him the necessity of securing a single purchasing agency for the War Department, but he had no special authority, so that nothing was done until I took up the question seriously with General March, after he came in, in March, I think it was, or the latter part of February, 1918. This supervisory charge of purchases with a view to consolidation did not work very satisfactorily. So, in July, 1918, the proposition was prepared and put up to the General Staff by which all purchasing would be consolidated under the Director of Purchase, Storage, and Traffic. That was not acted upon until the middle of October. Of course, there was opposition by all the bureau chiefs. We were robbing them, as they viewed it, of some of their authority and some of their perquisites, and we met with considerable difficulty in bringing it about. Unfortunately, the Armistice came along and the consolidation was really never perfected.

"The condition of affairs in the Quartermaster Department, when I came to Washington, was that General Sharpe had to stand responsibility for everything, while his authority did not amount to anything. He had not been relieved of authority, but they just took things away from him. He was very much cut up, and I felt sorry for him. Personally, I am very fond of him; he is a classmate of mine. He had been a subsistence officer. The subsistence end of the Q.M.D. was the best branch of the department, and the men were fed and fed well. That was his work and his specialty.

"The Secretary of War thought that the Quartermaster Department required reorganization. He told me I was to handle the department and there would be no interference; that is all I asked. And there was no interference at all. I had full swing.

"At the time I took hold of the Quartermaster Department the matter of clothing supplies was in very bad shape. There was a shortage of supplies of all kinds. Purchases were being made by a branch of the Council of National Defence, headed by Mr. Eisenman and Mr. Rosenwald. I think Mr. Eisenman was retired; I do not know what his business was before he retired. Mr. Rosenwald, if I understand it, was associated with Sears, Roebuck & Com-

pany, of Chicago. I saw Mr. Eisenman daily; Mr. Rosenwald did not appear active in the matter.

"Under the law, the Quartermaster General is made responsible for purchases and I did not care to share that responsibility with anybody else. At the time I came to Washington, it appeared, from the hearing I attended before the Military Committee, that the military program contemplated 1,300,000 men, and we had difficulty in providing for that number. I thought I saw a necessity for increasing that number, and on account of the shortage as developed by the fact that deliveries were not coming forward as rapidly as they were needed, that we had better go ahead and order for a greater number of men. I just told Mr. Rosenwald and Mr. Eisenman that I was going to take charge. It was not a matter for discussion. They continued in charge until their contracts were practically completed, and then I went out and bought supplies for an additional number of men. They strenuously opposed it and brought statistics to show how economical their administration had been. I just listened to them. You see, things were pretty strenuous when I came into the War Department. I did not go into back history at all; I had to get the men clothed.

"Mr. Eisenman said I was extravagant, and was

going to involve the Government in an unnecessary expenditure. I think then they had not increased the number, or I probably would have. That was a gamble I was willing to take. He came as a friend to warn me. I think Mr. Eisenman felt rather sore. He had been called in to do this job, and he had done the job well, there is no question about that. But there was considerable criticism, and I was in a position to continue that criticism. I have always liked to have things in my own hands; I get along better and with less friction.

"There was a shortage of clothing for the men already in the service; that is, underwear, breeches, shoes, coats, and things of that kind. I sent into the market every quartermaster in the country to buy up anything they could to be made use of; shoes, clothes, and anything they could get, and to supply to the men who needed it, and then, learning that it took from six to eight months to get things started and procure the things we needed, I placed orders for a larger force; I went into the market for 3,000,000 men.

"The authorization at that time was for 1,300,000. In March it was increased to 3,000,000 and I was saved, and then I started in on the 4,000,000. In June it was increased to 5,000,000 and I was saved

again. I would have been caught in August, September, and October, short and without the necessary supplies, but fortunately the Armistice was signed. I had not looked quite far enough.

"The weight of the clothing that was adopted was on General Pershing's recommendation. Toward the close of the winter of 1917-18 he increased the weight of clothing. We used the same specifications, practically, for the overcoats and blankets as had been used prior to the war, in which a certain percentage of shoddy was used. I think the navy has been patted on the back for using no shoddy; as a matter of fact, they purchased blankets of us, and there was shoddy in them. We had to use it to meet the situation. There was not a sufficient quantity of wool to meet the demand. We had difficulty in getting the Australian wool in, and we also had difficulty with the English Government in purchasing it, because they needed it. We had to commandeer wool and we practically had to commandeer cotton and heavy duck.

"We allotted the wool around among the manufacturers, according to the capacity of their mills. Prices were fixed by a price-fixing committee. Then we allotted that cloth to the manufacturers of clothing, and the price there was fixed by the price-fixing committee. If a mill did not care to take goods or to

take the wool to weave into cloth, we simply commandeered the mill. We did that in several instances.

"We commandeered the output of food products. We commandeered the pack of certain canned goods, such as tomatoes and other vegetables. We bought all our meat on prices fixed by the Food Administration, except where we started on the Canal a cold-storage plant, bought cattle from Colombia, and produced our own meat products. I had a representative of my division on the Food Administration Board, so as far as that is concerned I am responsible. The truth of the matter is that I did not pay much attention to prices. What I was after was food and clothing. And we fed the Army and clothed the Army.

"I do not think there is any question about it—a great deal of money was wasted. I never knew anybody to go to war without extravagance. I wasted money myself in getting clothing, at first, at any price I could buy. If we had been prepared in advance, we would have saved a great deal of money. I think everybody is willing to admit we were extravagant, and the very nature of affairs when we entered the war would predicate that.

"I never believed it necessary to adopt the system of a cost-plus-ten-per-cent contract basis in buying

supplies. Under that system, the contractor is not interested in what it is going to cost the Government. He is going to get his ten per cent, anyhow, and the fact of the matter is, his return being based upon a percentage of cost, the more he pays for labor and material the greater is the return. Therefore there is no incentive for him to economize. The Government takes all the risks and the contractor takes none.

"I found those cost-plus contracts extant in the Construction Division of the Quartermaster Department when I took charge. But I got rid of the Construction Division because I did not believe in the dual authority that existed at the time. It was either a case of my giving it up, or keeping it and the other man keeping his hands off, and I found that he preferred to keep his hands on, so I took mine off. I do not believe there were any contracts in the Quartermaster Department based on the cost-plus plan, or if there were they were abrogated afterward, because I was opposed to that method of doing business.

"As for transportation, when I took hold I brought to the attention of the General Staff the difficulties we were encountering due to the mixed-up conditions of traffic, each bureau getting cars and moving them to the seaboard, and alienation of the transport serv-

ice from the Quartermaster Department, and its separation from the inland traffic service.

"The Quartermaster Department, the Corps of Engineers, the Ordnance Department, the Signal Corps and the Medical Department—each of these five bureaus was pushing things to the seaboard without connection with the others. Everything was being rushed as soon as completed from the interior to the seaboard, and was being held in cars. The result was that the railroads could not get back their cars. Material was being shipped to the coast that was not called for overseas, so that there was a horrible congestion, particularly at New York.

"There was a body or commission of the Council of Defense called the storage committee—but they had nothing to do with the direction of those shipments. They had undertaken the direction of the construction of certain storage facilities on the seaboard. Facilities were under construction at the Port Newark terminal and also at Governors Island. Port Newark was far removed from the shipping point. It was brought into existence by the storage committee of the Council of Defense. General Sharpe was not in favor of it—but he would not thwart anything that anybody would want. It was difficult of access because of the narrow channel leading to Newark

Bay—a channel that was liable to fill up with silt because of the direction of the current and to freeze over in winter. When a fire occurred there in the winter of 1917, the fire-boats were unable to reach it. We used the Newark Terminal eventually for storage for inland points; but as far as the embarkation service was concerned, it was a colossal blunder.

"Conditions about New York had become very familiar to me because of my association with the commission for the development of the port. When I took hold, realizing the necessity in New York for storage facilities, I secured the commandeering of the Bush Terminals. I took up with Congress the matter of an appropriation for certain storage facilities along the tracks, and started in on that work. Also, I took the matter up with the Chief of Staff, and as a result there was created the Division of Storage and Traffic, under the General Staff, and I was assigned as its head.

"By this arrangement, all transportation matters in the United States for the Army were concentrated in my hands. Subsequently this was enlarged, so that all shipments made to contractors and by contractors to the various bureaus were also placed in my hands. Steps were taken to acquire or provide storage at the ports so that materials could be shipped into the

ports for storage or for reshipment overseas. At the time this division was created, the embarkation service was transferred to the Director of Storage and Traffic, so that the troops and supplies could be kept up with the movement of ships.

"When the Embarkation Service was turned over to me, I started a reorganization of it. There was an Army officer in charge, who had handled transports to the Philippines for the Spanish-American War; he was not a big enough man to handle the situation, so I tried to get the biggest shipping man I could find to come in and assist at that end of it.

"In January, I verbally called attention to the fact that we were getting more men overseas than available shipping at the disposal of the War Department would supply, and there was a meeting in the Secretary of War's office with Mr. Hurley, who promised a certain number of ships by the 1st of February, which ships did not materialize. So there is on record in the War Department a letter which I submitted to the Secretary of War, calling attention to the fact that either more ships must be supplied at once, or they must stop sending men overseas. As a result of that letter there was a conference between the Secretary of War, General Biddle, who was Acting Chief of Staff, Mr. Hurley,

and myself, and Mr. Franklin of the International Mercantile Marine. The necessity of bringing more ships into the service, the necessity of getting supplies to the Allies, were discussed, and the necessity for a shipping-control committee, consisting of Mr. Franklin, Mr. Hurley, and Sir Cunnop Guthrie, who had charge of the British shipping in this country, and it was the duty of that committee to supply the necessary ships for our shipping. So that brought in another agency. The handling of the men was left with the Army; the handling of the supplies, and so forth, was in the hands of this export-control committee, and the result was we got greater efficiency in loading, and, so far as the available shipping in the United States was concerned, we got all the shipping available for our purpose.

"In my judgment, it would have been within the power of the War Department to have consolidated the different bureaus into an efficient, centralized organization in the early days of the war, because when we started out after it, we did do it. We would not ship anything from the factory unless we had storage for it, and we would not ship anything to the seaboard unless we had provision for getting it across. The idea I had in mind was to direct the manufactures until they got to the other side, and that whole

control was put under one head. I think it good administration. Under the Division of Purchase, Storage, and Traffic you have one central purchasing bureau which would get the supplies, and then ship the supplies to the seaboard, and then ship them from the seaboard overseas—all by the same agency. There could not be any friction; there could not be any interference. It was just handled directly by one man. If you have a job to do, you want to give it to one man and let him do it."

Having a second job for Goethals to do, the Wilson Administration showed itself capable of learning from experience; it gave him this job outright and let him do it. The President left him severely alone, the Secretary of War did not interfere, nor did General Biddle, the Acting Chief of Staff. With his successor, General March, Goethals worked in perfect harmony. Peyton C. March was one of that brilliant group of officers selected for the first provisional General Staff in 1903. Like Pershing, he had seen some very active service in the Philippines. His service ribbon bears five stars for five victorious actions; as a young artillery officer he won his captain's brevet and the D.S.C. for "distinguished gallantry in action." He served on the General Staff from 1903 to 1907, and was detailed as our military attaché to

observe the Japanese Army in the Russo-Japanese War.

Returning from France, where he had been Chief of Artillery of the A.E.F., to become Chief of Staff on March 4, 1918, General March brought home with him full knowledge of the needs of every branch of the service overseas. He proved to be the ideal Chief of Staff who knows his job and knows also how to delegate authority. Compare the wretched performance of the War Department in the Civil War, with its continual shifts and changes, its almost total lack of policy, and the vacillating, interfering Halleck as Chief of Staff (nominally Commander in Chief) until 1864, when Grant took supreme command and insisted upon having it—compare this ghastly muddle with what happened in the World War, when the man for the job was discovered almost at the outset and did his work so smoothly that the public never woke up to it, simply because there was nothing to criticize. In General Goethals' opinion—and he was a hard man to satisfy—what General March did to help win the war will never receive the credit it deserves, because his work lay outside the limelight.

What General March thought of Goethals was

beautifully expressed in his telegram to his comrade's widow when Goethals died:

"I am shocked to learn of the death of your husband, my friend and right-hand man during the war. He was a great engineer, a great soldier, and the greatest Chief of Supply produced by any nation in the World War."

Throughout our participation in the war, Goethals kept trying to get to France. To George, who went overseas as a Lieutenant-Colonel of Engineers on April 8, 1918, he wrote: "I had hoped, when rid of the Q.M. duties, that I'd get a chance of getting over after putting the embarkation service in shape, but if I have to look after the purchases of all the bureaus, my hopes in this regard must go a-glimmering." He had picked a man to succeed him—R. E. Wood, who had been his Chief Quartermaster on the Isthmus and Purchasing Agent in the Emergency Fleet Corporation, and who was now, at the end of April, 1918, just back from France with the Secretary of War, and with a bright new star about to settle on his shoulder. "March sent in his nomination as Brigadier-General," Goethals informed George, "and while I don't know, I don't believe that the order will issue for me to transfer to him until after the confirmation. Wood's accounts of the

conditions in the Service of the Rear over there aren't very reassuring, and make my desires to get my clutches on that work greater than ever."

In his testimony before the committee of the House, Goethals explained: "General Wood reported for duty as my assistant in the Quartermaster Department, and then I just quietly transferred the duties to him while I assumed those of Purchase, Storage, and Traffic. In assuming those, I retained supervision over the Q.M.D., so that practically I was over the Quartermaster Department during the entire period, and merged that work into the duties of the Division of Purchase, Storage, and Traffic." He omitted to say that he was also Assistant Chief of Staff. His work on this side was of the highest military importance, but as he wrote to George in June: "A desk job isn't to my liking when I know I can do useful work over there along the lines which I feel competent to handle."

It was to be engineering, and there would be an Old Canal Man ready to lend a hand. "Williamson was here Monday and expects to get a Lt. Colonelcy in an Engineer Reg't that will go overseas at an early date. There is some doubt about his physical examination, but the slight imperfection, he thinks, will be waived. His boy Lee received a commission as 2d. Lt.

in the same Reg't. It's for R.R. work. Of course, if I *should* go over on the work March has in mind for me, I would get Williamson detailed over to me."

A month of suspense, and then, at the end of July, "the news came from Pershing practically to the effect that I am not wanted; though I am not mentioned specifically, I am assuming that the Secretary in his letter did. Well, it's a great and bitter disappointment, but there is nothing to do but grin and bear it. I am fully outfitted so that I am ready to go at any time, if, as March says, I am to go yet."

But it was not to be.

In his letters to George, their father gave him what news he had of his brother Tom, now overworked like the rest of the staff of Base Hospital 5, British Expeditionary Force, with the glut of wounded as the Germans advanced in April. Later, Tom served with the Canadians, and finally, with the A.E.F. Direct word came in August, when a Medical Corps major returned from France. "He reports Tom as the most military man in the outfit," Goethals wrote to George. "If he can outdo Major Oakleaf, then he's going some, for I was rather paralyzed by the way Dr. Oakleaf stood at attention, cracked his heels together, and saluted when I entered the room and left it."

At the end of October, "Gorgas dropped in to see me yesterday, to say that he had seen Tom, who was with Cushing's hospital in the Toul sector. . . . From what Cole told me of your whereabouts, you and Tom may not be far separated now and may have run into each other."

They had. The man who brought them together was Colonel George Luberoff, Chief Quartermaster of the First Army. He was a splendid example of the long-service non-commissioned officer of the old Army. At the time of our entrance into the war, he was a quartermaster-sergeant, and was then commissioned as a captain in the National Army. Through sheer ability, Captain Luberoff rose to be Chief Quartermaster of the First Army, the largest army unit of American troops ever organized in our entire history. Through St.-Mihiel and the Meuse-Argonne he wore the silver leaves of a lieutenant-colonel where an officer of longer commissioned service would have worn at least the star of a brigadier. His reward for one of the most efficient performances of staff duty in France was a commission as major, in 1920, in our permanent establishment, and the Distinguished Service Medal.

It was this officer who on October 1, 1918, en-

countered Tom Goethals at Deux-Nouds, where he was adjutant of the newly-organized 6th Mobile Field Hospital Unit. Colonel Luberoff promptly carried the news to George, who was on the staff of the Chief of Artillery at the headquarters of the First Army, at Souilly, only fifteen kilometers away. Greatly surprised, for he had supposed his brother to be still with the B.E.F., George obtained a car, drove over next day to Deux-Nouds and looked him up. Tom's field hospital was shortly afterward established betwen Varennes and Cheppy during the Argonne drive, remaining there until just after the Armistice.

"We're in bad shape on shipping," Goethals continued, on October 27th, "not having the requisite bottoms to carry what Pershing says are his minimum requirements. We are hustling men over while the cargo end gets worse and worse. We based our program of 80 divisions overseas by July next on certain estimates of the Shipping Board, but this body has fallen down most woefully, and there seems to be no chance of gaining enough impetus to make their monthly output, let alone the existing deficiency. I shouldn't be surprised to see the whole shipping situation collapse."

The Shipping Board, in Goethals' opinion, was saved by the bell. On November 10th he wrote: "If we are to continue with the war, we will have to reduce the number of men we send over to the number we can supply. The Shipping Board has fallen down badly."

Goethals kept perfecting the details of his own organization up to the last minutes of the war, with an eye to its utility in time of peace. "We took over the Engineers on the 1st," he wrote on November 3rd, "and are to take over Signal Corps on the 5th, Medical Corps on the 15th, and Ordnance on the 30th. If the war ends, I hope the reorganized Army will include one Supply Corps, divided into supplies and finance. I have been trying to get a change in the cumbersome property accountability."

But inertia and precedent prevailed, so that the Supply Corps of Goethals' dreams has never become a reality. For his services in reorganizing the Quartermaster Department and organizing and successfully operating the Division of Purchase, Storage, and Traffic, he was awarded the Distinguished Service Medal, while France made him a Commander of the Legion of Honor, King George appointed him an Honorary Knight Commander of the Most Dis-

tinguished Order of St. Michael and St. George, and the Chinese Government adorned him with the Grand Cordon of the Order of the Wen Hu (Striped Tiger), 2nd Class.

When the typical German soldier, in *All Quiet on the Western Front*, looked over at the American lines and observed: "Too much corned beef over there; too much wheat bread," he was paying Goethals a higher honor than any conferred by a king or a republic. And every American soldier who enjoyed one of the two hundred million smokes sent overseas by the Tobacco Fund of the *New York Sun* owes him an especial debt of gratitude. In an editorial on July 1, 1919, that paper acknowledged: "It was due to Major-General George W. Goethals, Director of the Bureau of Embarkation, that when shipping difficulties were at their stiffest, when cargo space was a prize almost unattainable, The *Sun* Tobacco Fund's shipments moved uninterruptedly across the Atlantic Ocean, tons upon tons, week after week, and month after month."

"As you retire from active duty today," Secretary of War Baker wrote General Goethals on March 1, 1919, "I want to place in your hands and on your record an expression of my deep appreciation of the service you have rendered the country in the war

emergency. The vast and intricate business of the supply departments of the government, suddenly expanded from our peace-time needs to meet the necessities of a great war, called for the highest talents and the deepest devotion. You brought both when you were recalled to active service. The success of your work is manifest, and I have no doubt that when the history of this great undertaking comes to be written, your contribution to the success of the country in the war will be an outstanding feature.

"For the personal sense of security and confidence which I have had I express my personal gratitude; officially, I express the gratitude of the Department and of the Government for the service you have rendered."

Two years and three days later, Mr. Baker added: "As I terminate my official connection with the War Department, I desire to express to you and file through the Adjutant General as a part of your record as a soldier an expression of my deep appreciation of the service you have rendered during the great war. Like every other soldier, you would have preferred, of course, to serve at the front, but the problems presented here at home were of equal gravity and difficulty, and you came into the War Depart-

ment at a very critical juncture. The success of our supply operation was in large part due to your splendid abilities and your devotion to the task. I am, therefore, making a record of my official appreciation as well as of my personal gratitude to you."

CHAPTER XVI

THE CONSULTING ENGINEER

"WHEN I was inaugurated Governor of New Jersey in January, 1917," writes Senator Walter E. Edge, "among other pledges I had made to the constituency was the preparation of necessary legislation and financing for the construction of a bridge across the Delaware River, a vehicular tunnel under the Hudson River, and a State Highway System to take the place of the then existing county control.

"At that period, there had been considerable criticism of the method usually adopted by County governments in contracting for and having constructed hard-surface highways. The proposal to take over the completion of a State-wide system by the State, while generally approved, at the same time brought with it some feeling of doubt and distrust as to the expenditure of approximately $15,000,000 which had been made available through a small State tax that had already been proposed by me as a mem-

ber of the State Senate, previous to my election as Governor.

"I realized that the only way to dissipate this feeling of uncertainty as to the expenditure of so large a sum would be the employment of an engineer whose reputation stood practically by itself. I clearly recall making an engagement with General Goethals, then in Washington, by telephone for a conference. I did not tell him over the telephone what I wanted to see him about. I came to Washington unaccompanied and met the General, dining with him at the Army and Navy Club. I spent the evening with him, unfolding my desire to have him accept the position, which I proposed to create, of State Engineer.

"I offered him a salary of $20,000 a year, which was double the salary of the Governor and by far the highest paid to any official in New Jersey. I am not quite sure that I had legislative authority to do so, but in New Jersey there has been for years a revolving fund which can be used upon a vote of the State House Commission, consisting of the Governor, State Treasurer, and State Comptroller, and I reasoned that if I could secure the service of General Goethals to take charge of our highway construction, and later the proposed tunnel and bridge, the ques-

tion of salary or where it came from would never be very seriously questioned or criticized.

"The General took the matter under advisement and, as I recall, in a few hours telegraphed or telephoned, I forget which, his acceptance. In New Jersey, his first responsibility was to prepare specifications for the building of concrete highways; specifications that would permit the use of patented material only under such conditions that there would be free and open competition. These were subjected to considerable criticism, but I was in entire sympathy with his judgment and the specifications stood."

Within two weeks after his public acceptance of the post of State Engineer, and while he was in consultation with the Highway Commission at Trenton, Goethals received President Wilson's letter of April 11, 1917, asking him to come to Washington to see the Shipping Board. The day after his arrival, he telegraphed Mr. W. G. B. Thompson, who had been one of his most trusted subordinates on the Isthmus and had promised to undertake the organization of the New Jersey Highway Department, to report to him in Washington.

Mr. Thompson reported on Tuesday, April 17th, the day when Goethals was endeavoring to complete

the organization of the Emergency Fleet Corporation. His assistant found him already established in his office in the Munsey Building and working furiously. "He had spent the entire morning before a Congressional Committee in connection with the wooden-ship program," writes Mr. Thompson. "When informed that I was reporting for duty in New Jersey, he, in his characteristic way, said, 'All right—go up there and go to work!' "

That was Goethals' way—to give a competent man a free hand and hold him responsible for results. He himself soon found that building the emergency fleet would leave him little or no time for building roads in New Jersey. He asked Governor Edge to release him altogether; they compromised on an arrangement by which Goethals received pay for only the days that he could devote to New Jersey's service. He mapped out a state-wide system of highways, which he insisted should be built of concrete. His views on road-building were well set forth in his answer to a request for information, made in 1919, by a member of the Borough Council of Pitman, Gloucester County, New Jersey.

"The roads in our country have broken down lamentably under the stress of war traffic, while I understand from those returning from abroad that

the French roads are bearing up wonderfully well. The former is due to the failure to build substantial roads in the first instance and from lack of proper supervision and repair after their completion. The macadam roads of France have borne all kinds of traffic due to the fact that the foundations were substantial, and consistent care of the surface maintained them in first-class condition at all times. The more recent constructions in France consist of heavy concrete foundations with a surface of blocks with very fine joints. The roads in this country will fail to do the work that those of France have until we go at the matter systematically and follow the lessons taught by them. For New Jersey roads I have strongly advocated concrete. Those opposed to it will say that this is liable to crack, the gravel or stone in its composition chip out and in time the surface spawl. When this stage is reached, an asphalt covering would give a first-class road, and, if maintained by constant care and repair, will last indefinitely. The difficulty with the gravel roads is the lack of proper foundation, followed by neglect, so that they last but a relatively short time."

"It will be of great value to us," wrote Governor Edge on December 27, 1917, shortly after Goethals' recall to Washington as Acting Quartermaster-Gen-

eral, "to be able to state that General Goethals is keeping an eye on the work so far as an advisory capacity is concerned. I have also told the . . . Highway Commission that . . . no new (State) Engineer should be appointed, especially in view of your partial retirement from the work, and that Mr. Thompson be retained as highway engineer . . . as he is supposed to represent your views and it is very important for the success of the highway system that you be at least to this extent associated with the work."

When he had left Washington at the end of July, 1917, Goethals had said: "So I'll go to road work and whatever else may turn up." Two new jobs turned up almost immediately. He was asked to become the president of the Wright-Martin Aircraft Corporation, which was not making satisfactory progress with its production of motors for airplanes. He insisted upon being given a free hand. This being granted, he took charge, and in the five months preceding his return to Washington he completely overhauled the company and greatly increased production.

The other new job was closely affiliated with the work he had been doing as State Engineer of New Jersey. On August 2, 1917, three commissioners ap-

pointed by the Governor of New York sat down at the same table with three others appointed by the Governor of New Jersey, and organized themselves as the New York, New Jersey Port and Harbor Development Commission. This was the happy outcome of two centuries and a half of bickering across the imaginary line dividing the great natural harbor against itself—a political and economic war that culminated in 1916 in "The New York Harbor Case." This began in bitterness, with sharp criticisms and savage sneers hurled back and forth by the newspapers and civic organizations on both banks, and ended in a harmonious chorus of approval when the Interstate Commerce Commission, refusing to disturb existing rate conditions, declared:

"It is necessary that the great terminals at the Port of New York be made practically one, and that the separate interests of the individual carriers, so long an insuperable obstacle to any constructive plan of terminal development, be subordinated to the public interest. . . . Historically, geographically and commercially, New York and the industrial district in the northern part of the State of New Jersey constitute a single community."

Before this judgment was rendered, the counsel for the State of New York, emphasizing the magni-

tude and intricacy of the problem involved, said, prophetically: "Its final solution will require the constructive mind of a great engineer—such as that of the man who planned the Panama Canal." At its very first meeting, the joint Port and Harbor Development Commission chose Goethals for its Chief Consulting Engineer.

The remaining five months of 1917 he devoted to an intensive study of the myriad details and perplexing problems of the Port. He prepared the estimates of the time and money required for the preliminaries of the task. He attended every meeting of the Commission, whose members soon came to rely on Goethals for the verities of every situation. How well the knowledge he thus acquired served the country after Goethals was made Acting Quartermaster-General has already been told. Our entrance into the World War soon made the unification of the Port of New York a military necessity. There had been no coördination of the many huge railroad terminals, no unified control of piers, warehouses, tugs, car-floats, nor lighters. Troops and supplies poured in and piled up until the whole complicated mechanism clogged and threatened to jam. The Port Commission, itself merely an advisory body, succeeded in having created the War Board for the Port of New

York. This body, headed first by Secretary McAdoo and then by Chairman Hurley of the Shipping Board, worked in conjunction with the Federal Railroad Administration and with Goethals as Director of Purchase, Storage, and Traffic, to organize and control the harbor and eliminate confusion and congestion, so that ultimately New York handled more than its share of the overseas transports, both troop and freight.

On his final retirement from the Army in 1919, Goethals "plunged into the work of formulating the now famous Comprehensive Plan, which required the gathering, sifting, and assimilation of a vast amount of data, and prolonged and frequent conferences with railroad, steamship, and other transportation agencies, with shippers and producers and legislators among others.

"The Comprehensive Plan provides in its basic feature for a thorough coördination of all the rail facilities in the Port by means of a series of belt lines bringing all parts in direct connection with each other. As it implied the unification in a business sense of a district lying in two separate states and as it obviously involved huge expenditures, it encountered the active opposition of the selfish, the prejudiced, and the timid. Nevertheless, the Comprehensive Plan was

duly adopted by the States of New York and New Jersey, a compact was entered into by them, and, with the ratification of the Federal Congress, the Port of New York Authority created to carry on the work.

"The Port Authority's jurisdiction extends over an area of approximately 1,500 square miles, with some 800 miles of waterfront, and containing almost 200 separate municipalities and about nine million of inhabitants. It is the most highly developed industrial and commercial district in the world. Each step in the effectuation of the Comprehensive Plan is a major project in itself. One of the first accomplishments of the Port Authority was the bringing into being of Marginal Belt Line No. 13, a rail facility running 17½ miles along the Hudson in New Jersey and tying together the terminals of the rail carriers in that part of the Port. General Goethals was assiduous in activities leading up to this achievement." [1]

This was a triumph not of engineering, for the seventeen and a half miles of trackage were already in existence, but of diplomacy, for their ownership was divided among four independent and mutually

[1] Memoir of General Goethals' services drawn up by Mr. William J. Vance, Secretary of the Port of New York Authority, February 18, 1928.

exclusive railroads. By persuading the four railroads to merge their tracks into Belt Line 13, under a single management, Goethals eliminated an incredible quantity of lost motion.

Hauling freight in and out of the Port of New York, like hauling dirt out of Culebra Cut, is primarily a railroad problem. Navigable water, or water easily made navigable, reaches nearly every part of the Port District, but many a carload of linseed oil still has to travel round Robin Hood's barn. A complete reorganization of the railroad terminal system was worked out by a large and competent body of engineers, under Goethals' command. This far-reaching scheme "calls for improving and opening up for joint use the existing belt-line links in New Jersey, and constructing other belt-lines along navigable New Jersey waters and farther inland; building similar marginal railroads along navigable waters adjacent to Brooklyn, Queens, Staten Island, and the Bronx, and utilizing with them the Long Island Railroad and the New York Connecting Railroad to form a belt-line system in New York; connecting the New York and New Jersey belt systems, at first by car ferry and ultimately by tunnel under the Upper Bay; operating all of these lines jointly, through new joint railhead terminals. . . . This

. . . system, bringing every railroad of the Port to every part of the Port, and thus giving every part of the Port opportunity to develop and have the economical transportation service needed for its commercial and industrial growth and expansion, constitutes the Comprehensive Plan." [1]

"A mistaken but formidable movement on the part of officials then in charge of the New York City Government," continues Mr. Vance, "to construct a combined freight and passenger tunnel connecting Staten Island and Brooklyn, threatened the disruption of the Comprehensive Plan and the uneconomic loss of a great sum of money. General Goethals took a large part in the preparation of the data presented to offset this move, and himself submitted to the New York Legislature the argument which caused the enactment of a law forbidding the city to proceed with the scheme.

"The four large bridges which the Port Authority was directed to build by the two States made a heavy demand upon General Goethals' time and energy. His talents and services were in constant requisition from the time when the first calculations were made on the Arthur Kill structures uniting New Jersey

[1] *Joint Report with Comprehensive Plan and Recommendations, New York, New Jersey Port and Harbor Development Commission, 1920,* p. 2.

with Staten Island at two points until the completed designs were approved for the mammoth structure to cross the Hudson from Manhattan to Fort Lee, and the plans for the Bayonne-Port Richmond (Kill Van Kull) Bridge were taking their final form."

Of these four bridges, Goethals identified himself most particularly with the more northerly of the two great steel and concrete spans over the Arthur Kill —that narrow strip of salt water which connects Newark and Raritan Bays and makes no great show on the map, but carries more commerce than the Mississippi River. On March 12, 1928, a few weeks after his death, the following resolution was moved and carried unanimously:

"Whereas, it is peculiarly appropriate that a memorial to this great engineer be established and maintained within the boundaries of the Port of New York District which he served so faithfully and efficiently, therefore, be it resolved, that the bridge from Elizabeth, New Jersey, to Howland Hook, Staten Island, New York, be named the Goethals Bridge, and that it shall thus be designated and termed in all official reports and communications of the Port of New York Authority."

The Comprehensive Plan, with its intricate system of inner, outer, and waterfront belt-lines, was drawn

up to take care of the traffic of the Port District, at the estimated rate of increase, until the year 1970. Some time between now and then, should the Port Authority decide to build the long railroad tunnel under the Upper Bay, it might be worth while to study Goethals' plan for a concrete-block tunnel. Shortly after he set up in practice as a consulting engineer, in 1917, he was asked by the New Jersey Tunnel and Bridge Commission to report on two types of vehicular tunnels which were then before the New Jersey and the New York Tunnel Commissions. One plan proposed a pair of eighteen-foot-diameter single-roadway tunnels to be constructed in the same manner as the existing Pennsylvania Railroad tubes under the Hudson; the other contemplated two single roadway tunnels to be built in sections on the river bank, towed out and sunk into position, in a similar way to the construction of the Michigan Central tunnel under the Detroit River.

Being asked to decide between the relative merits of the two plans, Goethals rejected both. Instead, he recommended the concrete block tunnel originated by John F. O'Rourke, a practical contractor who had had at that time more experience than anyone else in driving railroad tunnels under both the Hudson and the East River. Goethals, conceiving the

same idea, discovered that O'Rourke was already working on the plans for a tunnel thirty-six feet in diameter, carrying two roadways, one above the other, with sufficient width for three cars abreast on each level. This great tube was to be built of precast concrete blocks instead of cast-steel or cast-iron rings. Its construction involved a modified type of the standard tunnel shield, which O'Rourke was then in the process of patenting. After a most extensive study of the matter, Goethals recommended the thirty-six-foot concrete-block tunnel.

The personalities and politics of the long and unpleasant controversy that followed have no place in this book. How Goethals stood is best told in his own letters in March, April, and May, 1919:

"I have been fighting for my tunnel, but whether it goes through or not I don't know. The legislature will pass the bill all right, I guess; then will come up the question of type, and then the real trouble will begin. Of course the engineers are against it; the bridge engineers because I didn't advocate a bridge —the trench method of construction I knocked into a cocked hat, so that bunch is opposed, and the regular tunnel engineers because I substituted one tube for two, on the ground that its size is greater than anything that has been attempted, and concrete shell

is new. Politics are getting mixed up in it, so I guess I'm out, for I'll not monkey with this end of it at all."

Three weeks later, he wrote: "I see by the paper that the engineers have turned down my plan as unsuitable and requiring untried devices. I heard that 'structurally defective' was to be the report, but whether this is specifically charged or not I don't know. I am going to ask for a copy and then come back. . . . It charges, according to the newspaper articles, that concrete is not a suitable material for the Hudson River silt, that my plan will not bear the load brought upon it, that its construction requires new and untried devices. These are the important features. The other parts of the criticism, such as the capacity stated, expensive ventilation, etc., I don't care anything about. Public hearings are being held on the subject. . . . Tomorrow night the engineering and construction features are to be considered and I expect to take a hand in that. It's time wasted so far as any return is concerned, but I cannot let the statements rest undisputed. . . . Of course I am on the defensive and cannot do anything until I get their computations or analyses on which it is claimed that the concrete tunnel will not bear the external loads. In the meantime, I have been looking into the

construction of the brick tunnel which still exists and which forms a part of the McAdoo tubes. This is an eye-opener, both as regards the character of the material and the way it acts. If an oblong tunnel of brick with the larger axis vertical can stand up, a concrete circular ring certainly can."

In April, he said: "A conference has been called for Tuesday at Albany on the tunnel to which I have been invited, but I have declined. The controversy has become a personal one, and I do not care to participate in anything of that character. I am no longer interested, since their mathematics as applicable to the concrete block is all wrong, and this was my only interest or concern. I wouldn't take the job now for any consideration. . . . I wrote to Speaker Sweet, telling him that I was not interested other than to defend the plan that I had proposed, which was less liable to float than the cast-iron tubes and stronger; that the controversy had taken on a personal tone which was not purposeful in character and in which I didn't care to indulge, and I left the matter as it stood."

About all that was accomplished as a result of several years of controversy in this matter was to force those engineers, who began by declaring that a tunnel in excess of eighteen to twenty feet in diameter was

not practicable, to end by recommending two twenty-nine foot tunnels, as now built. This pair of tubes, built up of cast-steel rings, is the "Holland Vehicular Tunnel" of today. Its estimated cost was $29,000,000; the estimated cost of the Goethals tunnel, of greater capacity than both the twenty-nine foot tubes, was $24,000,000. The Holland Vehicular Tunnel, as now built, cost $49,000,000. Subsequent events, which need not be gone into, have substantiated by actual construction in other lines the soundness of the Goethals tunnel plan. His searching analysis and exposition of his critics' errors in engineering computations and conclusions remain unanswered to this day.

The mere bulk of Goethals' activities during his ten years' practice as a consulting engineer is appalling. His typewritten reports on various projects cram the four drawers of a large steel filing cabinet. Only a few of them can be mentioned in any detail—to name them all would outdo the Catalogue of the Ships.

While the war was still on, George W. Goethals & Company were retained as consulting engineers of the Inner Harbor Navigation Canal at New Orleans. This waterway, five and a third miles long, now connects the Mississippi River and Lake Ponchartrain. Normally, the level of the river at this

point is above the level of the lake; but when the river happens to be at extreme low stage, while at the same time a southeaster is causing the water to pour in through the Rigolets and bank up in the canal prism north of the lock, then the upstairs becomes downstairs for the time being. So far as is known, this is the only lock in the world where the high-level pool may be at either end; a peculiar condition that had to be considered in designing the gates and control machinery. The same system of electric control was installed as at Panama, and the organization was very largely made up of capable veterans from the Isthmus. George M. Wells evolved a masterly design for the lock, Henry Goldmark did the gates, and Colonel George R. Goethals, back from France and retired from the Army, was representing his firm as resident engineer.

The massive concrete floor, to which the comparatively thin, cantilevered lock-walls were to be tied like the sides of a ship to its keel, had to be supported on a forest of piles driven down through alternate layers of clay and quicksand. Unwatering the pit, so as to permit the pouring of the concrete floor without causing the quicksand to surge up into the excavation, was a delicate task that required a triple cofferdam, elaborate cross-bracing, and a most ingenious system

of artesian-wells to tap and control the dangerous pressures under the subsoil. Just at the most critical moment, the engineers suddenly found themselves fighting the even worse quicksands of local politics. Trained men were discharged right and left. The whole construction force was threatened with disruption at the worst possible time. By the hardest kind of fighting, the engineers succeeded in keeping their key men from being replaced by irresponsible substitutes, until after the unwatering had been completed and the lock floor poured.

As the head of the firm of consulting engineers, General Goethals was summoned to New Orleans by the officials, some of whom talked loudly about his "disobedience" even after they learned that he was in the hospital with a bad attack of grippe. Otherwise he would have gone down to New Orleans and talked with his accustomed plainness. What he says about politicians as a class, in his private letters, is that they're not to be trusted—that's certain. He always wanted to concentrate power in one responsible man; they always wanted to diffuse it through a board or commission.

"The best definition I can give 'boards' after my association with them during the war, and with commissions while we were constructing the Canal,"

Goethals said in a speech before the Rotary Club of New York, "is that they are long, narrow, and wooden. . . . Alexander Hamilton, in referring to the action of Congress in creating a board, said that it was a bad plan. Lincoln called commissions contrivances to cheat the government. There is no responsible head, but anyone can shirk responsibility by throwing it on the other. We always want some one who will accept responsibility if anything goes wrong."

Something went wrong on a public tunnel job where Goethals had been called in as consulting engineer, but he had nothing to do with the construction work afterward. The ground was rain-soaked until every hillside was shedding water like a tin roof. The next storm swelled a forgotten creek into a torrent that poured down through a forgotten air-shaft into the tunnel, drowning the hard-rock men like rats. But, as usual, responsibility was so spread out and subdivided that nobody could be held to blame. When Goethals heard of this, he said, concisely, "The trouble is, there are too few Theodore Roosevelts."

Lacking another Roosevelt to make him the benevolent despot of another Canal Zone, where some one would have been very definitely responsible for leaving that air-shaft open, Goethals felt less and less

inclined to work for democracies. Alexander Hamilton was the right statesman for him to quote. The wastage and disorder of the post-war period made his fingers itch for the reins. When he went to Boston to testify in the Cape Cod Canal case, at the time of the police strike in September, 1919, he observed with soldierly satisfaction: "Everything was quiet there. The National Guard was in control. I hope that Boston won't back down in its position. In the meantime, I think the situation with labor must be met sooner or later, and we'd better do it now and be over with it."

In October, writing from New York to his son at New Orleans, he said: "The strike situation here and over the country couldn't be worse, and I don't know what the outcome is going to be. It needs a stronger hand now than it did in 1916 when the railroad brotherhoods were allowed to dictate and when the blow should have been struck. I fear we haven't the strong hand. They sent troops over here to handle the dock strike, but somebody got cold feet and they haven't been used beyond the army transports. The President's threat concerning the coal strike is good if enforced, but this I question."

In April, 1920, he declared: "The railroad strike, elevator runners' strike, etc., have mixed things up

considerably and make me long to get my job as dictator."

He seems to have had a thoroughly congenial time with President Obregon when that military dictator invited Goethals to visit him at Mexico City in 1921. "They were very good to us," he reported, "and *when* recognition comes and *when* Mexican projects can be financed we can have all the work we want."

But that did not come in his time. For one reason or another, the firm of George W. Goethals & Company, Inc., never succeeded in getting all the work it wanted. In 1919 Goethals became president of the American Ship and Commerce Corporation, throwing his salary into the common pot for his partners to share. He wasted much time in Washington trying to buy vessels from the Shipping Board, while his associate, Mr. Kermit Roosevelt, made an equally barren trip to Brazil, where French interests blocked the purchase of German tonnage that had been confiscated in Brazilian waters. Then came a change of ownership and policy which caused both Mr. Roosevelt and General Goethals to resign from the American Ship and Commerce Corporation. In the meanwhile, the Cunard Line, after deciding to have Goethals & Company construct its new thirty-million-dollar terminal, changed its mind as soon as he be-

came the president of a competing line. This was decidedly annoying.

The breaks of the game went against Goethals & Company from the start to the finish. But the head of the firm never blamed his luck. After working unceasingly for over three years, at everything from gypsum to needles and investigating projects ranging from Asia Minor to Shanghai, he said ruefully, in November, 1922: "My intentions are good, but my deeds are nil. . . . We have always needed salesmanship. . . . Things don't come to us and yet we sit around expecting that will be the case."

Throughout these lean years and afterward, something like a steady procession of pleasant, plausible gentlemen kept passing through Goethals' private office. It must have been amusing for his partners and the clerks to see them go in and watch them come out, with words like these in their ears:

"I will not go into anything where my name is going to be used to raise money," or, on another occasion, "I will not go into the question of financing or selling bonds or anything of that kind. You are inviting me in so that my name can appear on the prospectus."

He described one scheme bluntly as a "Monte Carlo," another as a "Sellers proposition"—which

shows that he knew his Mark Twain as well as his Lowell. Again and again in his letters he speaks scornfully of "stock jobbers" and the "financial crowd."

After Goethals' death, Mr. George W. Wickersham, former Attorney-General of the United States, wrote to his widow:

"It has been my good fortune during the last few years to see the General from time to time, both in a personal and a professional way, and the more I knew him the more highly did I esteem him. You will have many tributes to his accomplishments and to his distinguished career. May I add mine to the *man*? He had the modesty of all truly great men. He saw clear and true. Nothing could disturb or cloud his perception of right and wrong. A thing was true or false; there was with him none of that deceptive middle region in which so many lose their way and fool themselves into unworthy compromises. I would there were more such men. They are the hope and the mainstay of our republic. He leaves to you and to his children the greatest of all heritages—a good name."

Once he was offered the presidency of a certain American corporation that held wide lands and wielded great power in a certain little tropical re-

public. It ran its own line of steamers; it owned railroads, mines, mills, plantations and other properties in different parts of that country. Ports must be built, jungles cleared, and the scattered holdings welded together into a great economic principality. This was the sort of work that Goethals loved. He saw the possibilities more clearly than the men who were pointing them out to him; his mind leaped years ahead of them in a breath. Then, too, he was homesick for the tropics. His letters tell how he loathed the slush and the Subway and steam-heated apartments. Now he could hear the trade-wind in the palms again, and see the familiar sunburnt faces of the Old Canal Men he would pick to help him tame the rivers and build the breakwaters of this new demesne.

But whenever Goethals became interested in anything, he sank his test-pits to bedrock. He soon found out how this company was treating the natives, and then nothing could induce him to become its president. "Its officials," he wrote, "seem to lack all appreciation of the human element."

Of Goethals' service as a practical humanitarian, at the time of the coal shortage in 1923, Governor Alfred E. Smith said:

"At great personal sacrifice he responded to my

request to become Fuel Administrator of the State at a time when we were suffering from a serious fuel emergency because of the coal strike. Here again, with his executive talent, his power of decision and of direction, he gave the State a useful and successful service."

"We are curing the sore spots," he wrote that January. "We are short of coal since we are allowed only 60% of the shipments in 1921, and the Bronx and Brooklyn have built up very much since then. Of course people won't use coke and bituminous coal unless forced to do so, and this we must do. As the coal question touches the pocketbooks and comfort of the populace, they are touched at the two worst points. The job is tiresome and nerve-racking, but we are weathering it thus far—but we are looking with great interest to Ground-hog Day!"

"I went upstate," he reported in the middle of February, "where coal conditions are very bad and a great deal of suffering in consequence. While the people are without coal, trainloads are passing through to Canada, so I advocated an embargo on the latter until our needs are supplied. Harding turned it down, and instead we're having a hearing before the Interstate Commerce Commission."

"We have been in the grip of a cold wave," he

wrote a few days later, "and it has played havoc thru the state, especially as more snow came with it in the northern part. There has been a good deal of suffering, and I am utterly disgusted with Washington and its conferences. Saturday I phoned up to the District Administrator to seize it when it became necessary, and when that started, the railroad produced coal. It's had a bad effect, however, because the Municipal Council at ——, against the advice of the Administrator, seized coal on their own account and took a car that was destined to Dannemora, which is worse off. Can't keep the fools all tied up. . . . The cold wave has made more work, especially in Brooklyn with the poorer people. The high winds have interfered with barge movements and it's been a hand-to-mouth sort of business. To add to our troubles, fire in one of the largest dealer's plant destroyed the handling apparatus, which seriously crippled it. I borrowed a makeshift equipment which helps somewhat but slows down deliveries."

In March, "Upstate continues to be in a critical condition, and there were S.O.S. calls from Watertown on Friday, but we could get coal running there without much trouble, so I hope the crisis they feared didn't materialize."

Finally, on the 20th, Goethals said in exasperation:

"I have been waiting for two or three pleasant springlike days to go to Albany and tell the Governor we are ready to disband, but they haven't come as yet, so I have decided to go Thursday, willy-nilly, and tell him to do it on March 31st. I will be more than glad to cease functioning, for I have never had a job in which I feel I have accomplished so little as in this one."

That Governor Smith thought otherwise is evident, not only from what he said of Goethals' services as Fuel Administrator, but from his offering him that June the newly-created post of State Superintendent of Public Works. This Goethals declined, for he had decided to remain in private practice, though no longer as the head of Goethals & Company. That firm was dissolved in the summer of 1923.

The New Orleans Chamber of Commerce sent for him to estimate the tonnage that could be expected to use the Intracoastal Canal. The Erie Railroad needed him at Reading and he was asked to make a survey of the Chicago stockyards. But where his services were most called for, during this period, was in California.

Los Angeles had him inspect the site of the Boulder Canyon Dam on the Colorado River, and visit Las Vegas, Needles, and Black Canyon in

Nevada. Then a fire started in the brush of Wildcat Canyon, leaped out with a gale of wind behind it, burned up a large part of Berkeley, California, and thoroughly convinced everybody in the region that the time had come for the long-discussed public water-supply. General Goethals and Mr. William Mulholland were chosen as consulting engineers for the East Bay Municipal Utility District to select a source of water-supply for the group of cities on that side of San Francisco Bay. After prolonged surveys, they made their decision and drew up the project to bring in water from the Mokulumne River. Goethals was also consulting engineer for the Los Angeles County Flood Control District, and inspected the dam sites at Pacoma and San Gabriel Canyon. He was employed in the same capacity by the city manager of San Diego, to develop its water-supply.

"I'd like to settle in California and open an office in San Francisco," he wrote in one of his letters, "but I'm getting too old."

Also, he still had work to do in the East. At the end of 1925, the Intracoastal Canal Association of Louisiana had him make an industrial survey of the Gulf Coast. His last important work was in Florida. For a brief time in 1926 Goethals was consulting

engineer for the construction company that was to build a harbor at Hollywood, Florida. Funds were not available, for the land-boom was deflating, and he severed connections with that enterprise in March. Finally, he signed an agreement with the Lake Worth Inlet Commission to plan and supervise the construction of the new port of Palm Beach.

He drew the plans for two long jetties extending out into deep water in the Atlantic, and protecting the entrance to a channel that was to be excavated in from the ocean, right through the sandy island of Palm Beach, and across Lake Worth to the mainland. There the channel would broaden into an ample turning basin, for ships entering and leaving the large rectangular slip that was to be dug out of the mainland. This slip would be lined on three sides by a quay wall dock, backed by storage and transit sheds, with railroad tracks and a spur to the main line of the Florida East Coast Railway.

"The design and construction were modern in all respects," writes Mr. Sydney B. Williamson, "and done in accordance with General Goethals' usual workman-like manner. . . . The agreement required that he place the necessary engineers and inspectors on the work and provided further that if through illness or other causes he was unable to visit the job

during a period of three months, or to send an associate familiar with that class of work, then the agreement could be canceled. For this reason, he asked me to become associated with him. At the beginning, we visited the work together on several occasions. Then, when the General's health began to fail, I offered to go down and take charge. Thereafter, he was able to make only two more visits; the last time being in June, 1927."

It was during that month that Goethals left New York for California on his final inspection trip of the East Bay water-supply project. When he returned to New York in July, he took to his bed with renewed attacks of the recurrent chills and fever that had been troubling him since early spring. A specialist, in whom the General had great faith, had put him on a diet, and now told him that all he needed besides was a good long rest.

The hardest thing for Goethals to do was to do nothing. The one place where he could endure to sit and rest was on the porch of his own house looking out over the shifting tide-rips of Vineyard Sound. To obtain that view, he had had Horace Tilton, who had built the house for him thirty years before, move it in 1923 from its original site to a better situation down by the beach near West Chop Light. This was

no mean feat of engineering, but Mr. Tilton was an old-time Yankee carpenter and contractor who knew his trade. He cut the two-story house into three sections, moved them on rollers for two long Vineyard miles, then reassembled them on the new foundations so skillfully that not a crack could be seen in the plaster and every door in the house swung true. A man who could do a job like that was a man after Goethals' heart. Horace Tilton was his closest friend on Martha's Vineyard, as Father Collins was on the Isthmus. The New Englander was a Canal man himself; from 1911 to 1913, Horace Tilton was a general carpenter foreman on Miraflores Locks.

The World War brought Goethals closer to the younger men of his home town. He was a charter member of Tisbury Post, No. 257, American Legion. Tisbury is the legal name of that town, by the way, but Vineyard Haven is the post-office address of Tisbury. The post enrolls every veteran from the neighboring town of Gay Head, where no man was drafted but so many enlisted voluntarily that Gay Head was officially recognized by the Governor of Massachusetts as furnishing the highest percentage of any town in the State, in proportion to its population, of men who served in the World War.

There is no more democratic meeting-place on earth than a Legion post in a small town. Ex-service men meet there on a plane of absolute equality, regardless of wealth or social position, public office or former rank. Exactly as Theodore Roosevelt enjoyed attending Matinecock Lodge at Oyster Bay, when he was President of the United States and the master was Worshipful Brother Doughty, gardener on an estate near Sagamore Hill, so Goethals liked to keep in friendly contact with the younger men of Tisbury Post.

There were two "Comrade Goethals" on the muster-roll, for his son George had acquired his own summer home on Martha's Vineyard, for the benefit of his own son, George W. Goethals 2nd. This boy was not the General's only grandson, for his uncle Tom had come back from France to marry his sweetheart, Mary Webb. From their home in Brookline they would send Tommy and Henry and Peter, the baby, to spend the summer at grandfather's. The General used to take the older boys on walks and sailing parties. Then after he had sent them home in the fall, he was known to complain that their parents would spoil all the results of his discipline.

But he could not play as he liked to with his grandsons, that August of 1927. He could still move

about the garden and cultivate his roses, but no longer could he take the long walks that had been his greatest recreation. He had a painful and increasing lameness in his left thigh. The specialist called it sciatica and advised rest. His sons, coming to the Vineyard at the end of August, begged him to go to Boston, where Tom was now a practicing surgeon, for a thorough medical examination. But their father flatly refused to do so.

He returned to New York in early September, and after another attack of fever, felt better, went to the University Club, and dined for the last time with his two old friends, Joseph Bucklin Bishop and Sydney B. Williamson. He went down to his office at 40 Wall Street almost every day for the rest of the month. On October 5th, he inspected, with other engineers, the finished piers of the new Staten Island bridges. That was his last day's work in the field, nor did he ever return to his office. But though unable to leave his hotel room, he had his secretary come there every day and transacted much work for several weeks yet.

In the middle of November his symptoms became so alarming that he finally consented to the thorough medical examination that his son, Dr. Thomas

Goethals, had urged him to take in August. Competent doctors were called in, and the X-ray confirmed their diagnosis of cancer. A palliative operation might prolong his life for a few months but no more.

For a few days, the truth was withheld from him. When he finally knew, he said, reproachfully: "I don't see why they would not tell me the truth. I am not afraid to face anything as long as I know the facts and don't have to grope in the dark. As to the palliative operation, I won't stand for it and then have to be a cripple from it what time I have yet to live. I prefer to face the situation and go out fighting."

He fought to the end. He had heard of a medical treatment and insisted upon trying it. The doctors consented, knowing that the change could work no possible harm and would help the patient's morale. To provide proper facilities, an apartment was taken at 12 East 86th Street. As Goethals drove up there through Central Park on a warm and beautiful sunlit day in early December, he remarked that he meant to sit out as much as possible in the sun by the Museum, to put himself in shape to join the crowd of old-timers who were sailing for the Canal on the

5th of January. He had even had an old bolt of white cloth brought from the Vineyard, so that he could have some new white suits made for the trip.

He had promised to write the article on the Panama Canal for the fourteenth edition of the Encyclopædia Britannica. This he accomplished with the collaboration of Joseph Bucklin Bishop. Another old friend, Sydney B. Williamson, had gone to Palm Beach to take charge of the harbor work and persuade the local authorities to annul their agreement with Goethals. He himself dictated a letter to the Commissioners of the Port of New York Authority, requesting that they either accept his resignation or give him an indefinite leave of absence without pay. Let it be remembered to their honor that the Commissioners unanimously resolved that as long as Goethals was alive he should remain their Chief Consulting Engineer—at double his former salary.

The last letter he ever dictated was on January 9, 1928, to General M. L. Walker, Governor of the Panama Canal, Balboa Heights, Canal Zone:

"DEAR WALKER:

"When I saw you last Summer, I had every hope of making the trip to the Isthmus with the reunion

of former employees of the Commission and the Railroad which sails from New York this week, but illness has compelled me to give up any thought of going on this trip.

"Doubtless during the visit of the men in Panama there will be some occasion when all will assemble in one gathering. As their former chief I should like to extend through you, their present chief, my very best wishes for a happy reunion and my sincere regret and keen disappointment at not being of the number. This greeting goes not only to those Old Timers from the States, but to those still in the service and helping to make the Canal operation the same success which their combined efforts achieved during the construction days. No leader of any organization ever took greater pride in the spirit of loyalty to the work which animated its entirety, in the cheerful understanding of hardships when needed, in the overcoming of the difficulties that were encountered, and it is real affection which I have for the men who gave willingly to gain the end to which we were striving.

"My thoughts will be with you all and I send to each and every one my affectionate greeting and best wishes.

"Sincerely yours,

GEO. W. GOETHALS."

At Balboa Heights, on January 21, 1928, the committee appointed for the purpose composed and signed this answer:

"One thousand of the men and women who worked with you and under your direction have read your letter of January 9th, sent through Governor Walker, and have felt touched that you remembered them at this time. We wish you were here to enjoy with us the renewal of old associations and memories; and to see with your own eyes how successful has been the work which was completed under your leadership and to which you contributed more than any other man.

"May we express to you some of the thoughts which have come to us on the occasion of this visit to scenes of your former labors? A few years ago, a vast army of workers eagerly toiled beneath a tropic sun to remove a great natural barrier to man's advancing civilization. Their success was due to your leadership; the patriotic, cohesive spirit that animated them to accomplish the purpose of their native land; and the friendly coöperation of the Republic of Panama and her citizens. The barrier is removed and mankind is the richer thereby. To have been a member of that army was a privilege, to have been its leader an imperishable honor.

"We affectionately greet you, our Chief.

"THE OLD TIMERS,
By their Committee,

Frank Feuille
H. O. Cole
John O. Collins
R. M. Elder
R. H. Whitehead
C. C. Carr
William Gilbert
Frank H. Wang
George W. Green."

So they signed but they did not send the message. For in that very hour the word came to the Isthmus that "The Colonel" was dead.

CHAPTER XVII

FINAL HONORS

GENERAL GOETHALS died at five minutes to noon on Saturday, January 21, 1928. He was unaware of those who watched at his bedside, for he had remained unconscious for the preceding forty hours.

To the public, who had heard nothing of his illness and but little of his activities during the last few years of his life, his death came with a shock of surprise. "In any other land but ours," observed the editor of the *Boston Transcript,* "Goethals would have received the highest titular honors and emoluments. With us, he had to retire from the public service and take up private work in order to earn a competence at all suited to his abilities. And when he retired, the country which had profited so enormously by his labors proceeded straightway to forget him. Or at least so it seems—but on the pages of history his name will be forever emblazoned."

President Coolidge wrote to Mrs. Goethals: "The

death of your distinguished husband has caused widespread sorrow, not alone among his host of friends, but upon the part of his countrymen in general.

"I wish to extend their sympathy as well as my own in this moment of grief to you and the members of your family.

"General Goethals will be remembered all over the world for his great achievement in the construction of the Panama Canal, as Chief Engineer, and in placing its operation and the administration of the Canal Zone on an extraordinary basis of efficiency which has made it so successful. But his skill and genius were no less marked in other works; particularly were they invaluable to the government during the World War, when, coming back from a well-earned retirement, he displayed great ability in various activities.

"His name, known throughout the world, will remain forever on the roster with those who are doing big things for our country.

"CALVIN COOLIDGE."

Mr. Dwight F. Davis, Secretary of War, said: "In the army, he was honored and respected both for his technical qualifications and his leadership."

Major-General Summerall, Chief of Staff, after summarizing Goethals' achievements, concluded: "In peace, his energy and skill were applied toward the advancement of our national prosperity and the promotion of the welfare of our people; in war to the assurance of our rights and liberties. The army feels a distinct personal loss in the passing of one whom it looked upon with admiration for accomplishment, reverence for character, and love for association."

"There was something about General Goethals that you find hard to describe," said Major-General Jadwin, Chief of Engineers. "He was just about the hardest worker I have ever known. He carried to successful conclusion the greatest of tasks without much apparent effort. He was not a society man; just a man who loved family, friends, and his work. And with all this he was about the greatest executive the Corps has known."

"In the passing of General George W. Goethals the State of New York, as well as the nation, has lost a notable public servant," declared Governor Alfred E. Smith. "He brought to his duties as Chief Consulting Engineer of the Port of New York Authority that same expert wisdom which made him the genius of the Panama Canal.

"At great personal sacrifice, he responded to my request to become Fuel Administrator of the State at a time when we were suffering a serious fuel emergency because of the coal strike. Here again, with his great executive talent, his power of decision and direction, he gave the State a useful and successful service.

"He has left behind him a permanent memory of a great personality and a splendid record of achievement."

The Pan American Union, the Commissioners of the Port of New York Authority and of the many other districts where he had served as consulting engineer; the Chamber of Commerce, the India House, the English Institution of Civil Engineers, the Royal Society of Engineers of Holland and other organizations in which he had held honorary membership, sent messages of sympathy and praise. Individual letters were so numerous that only one will be quoted:

"I was proud to know him," wrote Mr. William Lawrence Saunders, president of the Ingersoll-Rand Company, "for he was distinguished as few men are, winning his laurels through his own work and ability. As an executive and administrator I know of no one his equal. He knew how to handle

men and to get the best results out of them. The Panama Canal is his monument."

"It becomes my sorrowful duty," proclaimed the Governor of the Panama Canal, "to announce the death in New York of Major-General George Washington Goethals, distinguished builder of the Panama Canal, upon whom we have all looked with such reverence and affection. Those who have been privileged to know intimately this great man suffer in his passing a lasting, personal loss. Those who have not had such close contact with him will grieve over the death of a man whose sterling qualities served to inspire their efforts during the building of the Canal and its early years of operation.

"The life of General Goethals will serve forever as a brilliant beacon to light the youth of America on the path of true patriotism and manliness. God rest his soul in peace. He leaves to his family the priceless heritage of a noble, useful, and unselfish life passed in the service of his country and his fellow men. The hearts of all go out to Mrs. Goethals and his two sons, in deep sympathy."

"The death of our former chief," cabled the employees of the Panama Canal and the Panama Railroad Company, "has deeply affected us all and bereft an army of Canal workers of their beloved friend,

'The Colonel.' Your husband's sterling qualities will remain a happy memory while we live and his work here will endure always as a monument to one of the world's greatest engineers. We extend to you and your sons our sincerest sympathy in this great sorrow."

From Leningrad, a Russian who had been a student engineer on the Isthmus in 1911; from Bahia, an American who came out of the Brazilian jungle to learn the belated news of Goethals' death—from far and near, the Canal men, past and present, expressed their sorrow. As the Metal Trades Council of the Canal Zone said in their formal resolution of sympathy, they remembered him for "those higher qualities of justice, democracy, and sympathetic interest in the welfare of those employees who under his supervision were employed in the construction of the Panama Canal."

But of all the Canal men, none had better cause to mourn for the Colonel than the black workers on the Silver Roll:

"The news of his passing to the great beyond to join the truly great who went before were received by the West Indians—the negroes of the Antilles who furnished the greatest percentage of brawn and

no little brain in building the Canal—with reverence. It is reported that he was buried on Tuesday last alongside other distinguished North Americans. The spirit of those West Indian employees of the Panama Canal and the Panama Railroad Company who worked under his direction composed, we are sure, an unseen unit in the ranks of the mourners in the cortège which wended its way to West Point to pay him the tribute he so well earned from them during his lifetime." [1]

"In sincerity we pay our humble tribute to the man whose efficiency built the Panama Canal, a job which he accomplished mainly because he possessed too noble a character to be perverted by anyone misrepresenting designedly the rights of the humblest employee of the great work which he was chosen to direct." [2]

"In common with the gold or white force we have been touched by this sad circumstance, for we also loved and respected him. For if they love him because, aside from his other good qualities, he was a man of justice, then we ought certainly to love him more! It was that justice in him, backed by an iron will, and the philosopher's understanding, that will

[1] A.F.N., *Panama Star and Herald,* January 24, 1928.
[2] *The Workman,* Panama, R. P., January 28, 1928.

keep that old white-haired figure clear and prominent before our minds as long as life shall last." [1]

The man of justice, the protector of the humble, the iron-willed ruler with a philosopher's understanding—here is the familiar figure of popular hero-worship: the good king who reigned in the good old times. This hero-worship cannot be dismissed as the mere sentimental delusion of romantic retrospection, for it flourished in his lifetime.

"His ability to judge and handle men was perhaps his most valuable asset and a factor of supreme importance in the successful completion of the Canal. Although a hard taskmaster, he was invariably and inflexibly just, and patient where he could discover good intentions. Toward the close of his long administration, the admiration accorded to him by his subordinates assumed the proportions of a cult." [2]

He won this loyal devotion of his followers by being devoutly loyal to his own ideals, by living up to the code of conduct he laid down in his address to the graduating class of 1912 at West Point:

"The most important duty that will devolve upon you is the control, direction, and command of men.

[1] Whyte, S. H., *Panama American*, January 29, 1928.

[2] Lecture by Jay J. MORROW, Colonel, U. S. Army (retired), Governor of the Panama Canal, before the New York Section, American Society of Civil Engineers, New York City, January 10, 1923.

To successfully accomplish any task, it is necessary not only that you should give to it the best that is in you, but that you should obtain for it the best there is in those who are under your guidance. To do this, you must have confidence in the undertaking and confidence in your ability to accomplish it in order to inspire the same feeling in them. You must have not only accurate knowledge of their capabilities, but a just appreciation and a full recognition of their needs and rights as fellow men. In other words, be considerate, just, and fair with them in all dealings, treating them as fellow members of the great Brotherhood of Humanity. A discontented force is seldom loyal, and if its discontent is based upon a sense of unjust treatment, it is never efficient. Faith in the ability of a leader is of slight service unless it be united with faith in his justice. When these two are combined, then and then only is developed that irresistible and irrepressible spirit of enthusiasm, that personal interest and pride in the task, which inspires every member of the force, be it military or civil, to give when need arises the last ounce of his strength and the last drop of his blood to the winning of a victory in the honor of which he will share."

Let one who has shared in the honor of many victories bear witness that Goethals kept faith with his

fellow men. There were thousands of European workmen employed during the construction of the Canal, and they had much to complain of about their food and quarters, their pay and their treatment by American foremen and engineers. They could not talk over their grievances with the Colonel, for Goethals had no knowledge of Spanish or Italian or modern Greek. But he found a man who could speak all three fluently, and many tongues besides. Some of the Greek peasants had soldiered with him in Thessaly. The Spaniards found him a most courteous and sympathetic *caballero*. And where could an Italian find a truer champion of his rights and liberties than in the grandson and namesake of Giuseppe Garibaldi?

Within sixty days he had cleared away all misunderstandings and allayed all discontent. After two years on the Isthmus, Garibaldi left us to fight for Madero in Mexico, then to follow the traditions of his family by raising and leading a Garibaldi legion to fight for France, and to earn the distinction of having the German Empire offer a reward of ten thousand dollars for his capture, alive or dead.

When Goethals died, General Giuseppe Garibaldi saluted the passing of a soul as knightly as his own in this message to Goethals' son:

"Under the shadow of our flags in mourning, in the everlasting dream of the Canal and in the devotion and love of all who toiled under him, will always live your great father."

There spoke the spirit of the victorious army that built the Panama Canal.

At Vineyard Haven, Tisbury Post donated the American Legion marker that his two sons reverently installed on Memorial Day, 1928, at the foot of Goethals' grave. By unanimous vote of the membership, the name of the post was changed to "George W. Goethals Post." At their suggestion, every flag but one in the village was flown at half-mast from the time of Goethals' death until his funeral. One staff alone stood bare until the hour of the funeral service. Then Horace Tilton and a few other close friends and neighbors went into Goethals' house, brought out the flag that he had raised over San Juan de Porto Rico, ran it up, and lowered it to half-mast on the flag-pole before his home. Placing a wreath at the foot of the flag-staff, they stood there with bowed heads; then departed as they had come, in silence. That was the perfect tribute.

"Let me stay here," Goethals had protested when the doctors were urging his removal from New York to another city where he could rest in the hospital best

equipped to give him treatment. "If I stay here, I'll be much nearer to West Point."

His dying wish to be nearer to West Point is the epitome of Goethals' whole life and character. No place on earth was nearer and dearer to him than the Academy where he had grown to manhood. Afterward, he grew mightily in knowledge and understanding of the world, but he never outgrew the ideals of his youth—the stark ideals of his Alma Mater. He read the answer to all ethical problems in three words carved on a granite shield: Duty, Honor, Country. Aristotle would have understood him; here was the strong-souled man who built his life on the eternal verities. Sherman and Roosevelt understood him; the rough Canal men understood him—only the shrewd men of the world failed utterly to understand him. They saw only a name to be exploited, a name that had been kept untarnished for a thousand years. They saw only a highly efficient executive in an office at 40 Wall Street, a celebrated engineer who had been retired from the Army in order that he might earn the fortune they thought he would stoop to steal. They could not see the Cadet Officer of the Day whose classmates scrupulously concealed from him their intended prank, because he would be on his honor to report every breach of the regulations

that came to his knowledge during his tour of duty. For half a century Goethals had striven unceasingly to bring himself into closer communion with the spirit of West Point, "so to live," as he admonished the men of 1912, "that no discredit will be reflected on the Academy or the Army. The outside world knows our service and our Alma Mater by the impressions we make upon it, and we owe it to them, to the Nation which educated us, to live up to the ideals of honor, self-abnegation, sacrifice, and devotion to duty which this institution has endeavored to instill in you."

Honor—the very name of the Roman who crossed swords with the infidel. Devotion—the young Crusader scaling the walls of the Holy City. Sacrifice—the tortured prisoner defying the Beggars of the Sea. Self-abnegation—the scholar spurning the gold at the city gate. The ideals of his forefathers were the ideals of his Alma Mater. When the Release from Quarters sounded at the end of his life's day, his spirit walked her plain, at ease in Zion.

They bore him to the Old Chapel where he had worshiped as a cadet. Long since outgrown by the expansion of the Corps, it now serves as the mortuary chapel of the Post Cemetery. Formed up outside stood all the troops this world-famous conqueror

had ever commanded: B Company of the Cadets and the Detachment—late E Company—of the Engineers. These fittingly formed his escort.

The Superintendent, the Commandant, the members of the Academic Board, officers and soldiers from the Academy and the Post; a delegation from the Port of New York Authority; Professor Lewis Sayre Burchard, the oldest member of the faculty of the College of the City of New York and representative of its alumni, with a few intimate friends—were in attendance, besides the immediate family. Several old friends, including Sydney Williamson, were prevented from attending only by severe illness.

The honorary pall-bearers were General Peyton C. March, Chief of Staff in the World War; Mr. Charles E. Hewitt, General Charles J. Bailey, and Colonel George W. Goode—all members of the Class of 1880; Admiral H. H. Rousseau, General Harry F. Hodges, and Joseph Bucklin Bishop, of the Isthmian Canal Commission, and Colonel G. J. Fiebeger of the Class of 1879.

The Reverend Horace Percy Silver, rector of the Church of the Incarnation, New York, and long a friend of General Goethals', read from the fourteenth chapter of the Gospel of St. John, and with the congregation recited the Lord's Prayer and the

Apostles' Creed. There was no eulogy beyond the words:

"We thank Thee, dear Lord, for the splendid service rendered by this, Thy departed servant."

At the close of the benediction, six veteran non-commissioned officers of the Engineers raised the flag-draped coffin to their shoulders and bore it forth to the waiting caisson. Behind the caisson was led the riderless horse with the boots reversed in the stirrups. Mourners and escort took their appointed places. From the Academy band rolled the deep, heart-shaking lamentation of the "Dead March" in "Saul." At half-step, to the boom of field-guns firing a last salute, they bore this soldier, whose victories had not been those of war, to an honored place among the heroes of many battles. The white-robed priest intoned the final prayer. Three crashing volleys over the flower-decked grave; then through the rolling echoes the bugler sounded Taps.

Here are the Nation's children schooled in arts
Of Peace, in discipline of War; their hearts
Made resolute, their wills subordinate
To do their utmost duty at the call
Of this, their Country, whatso'er befall.

Final Honors

Broadcast upon our History's ample page
The records of their valiant deeds are strown.
Proudly their Alma Mater claims her own.
May she have sons like these from age to age.

—Edward S. Holden,
Class of 1869.

APPENDIX

ADDRESS

OF

COL. GEORGE W. GOETHALS

UNITED STATES ARMY

AT THE GRADUATION EXERCISES OF THE CLASS OF NINETEEN TWELVE, UNITED STATES MILITARY ACADEMY, WEST POINT, N. Y.
WEDNESDAY, JUNE 12, 1912

INTRODUCTION OF COLONEL GOETHALS BY THE SUPERINTENDENT

FORTY years ago, in 1872, two boys entered what was then the Free Academy, now the College of the City of New York, from the public schools of that city and there became classmates.

One entered West Point in 1873 and the other remained at the college through his sophomore year and entered West Point in 1876.

Those two young men then became contemporaries and friends as cadets, have known each other and have served together off and on, and have been friends ever since.

It is therefore an unusual personal and official pleasure and honor for one of those then young men to announce that the other, now the most distinguished engineer of the age, the man who by his own ability, force of character, and modesty is bringing to a conclusion the most stupendous engineering project in the history of the world, is to honor us with an address.

When we consider that he has had not only to supervise the work of 40,000 employees, but to provide and care for them also, and the hundreds of millions of dollars that have been expended under his supervision, and that the finger of scandal or graft has never pointed at his ad-

ministration and never will, it speaks the man he is; and, my friends, the country has a right to expect and will receive that kind of administration whenever it is intrusted to the product of this institution.

He needs no introduction to this body; he is of it, and we glory in that fact.

I beg to present George W. Goethals, of the class of '80.

ADDRESS BY COLONEL GEORGE W. GOETHALS, UNITED STATES ARMY

I desire to express appreciation of the honor shown me by General Barry by my selection to address this class, for it can be conferred on but few, and within my knowledge this is only the second instance in which any but a general officer or one previously holding that rank has been so honored. It is especially prized coming from one for whom I entertain such high respect and admiration, whose love for the Academy I know, and who has always zealously striven for the advancement of its interests.

Thirty-two years ago today my class held your place. The four years' course of training had been completed, and though fewer distractions and less freedom were accorded us in those days I realize that we were no more eager than yourselves to get our diplomas and escape from the restraints imposed by this old institution. It is not my purpose to detain you unnecessarily, for I still remember how I wished some one would put an end to the

long speech meted out to us; neither will I forget that advice has been defined to be something which everybody is ready to give, but which nobody is willing to follow, except when in a particular case it accords with his own wishes and desires.

Thus far you have followed a curriculum intended so to train you mentally, morally, and physically as to enable you to grapple with hope of successful issue the future problems which will confront you. Today you pass from the patient, careful guidance and direction of the academic board and its corps of assistants, and henceforth you are to stand alone, coping with the duties and problems of actual life. The duties and problems which confront the Army officer in recent years are more numerous, more varied, and complex than in former days, so that greater opportunities are offered. But now, as then, success in each instance depends upon the man himself—upon his character, his ability, and his capacity for work, with character placed above all else.

It is the professed primary object of this institution to develop that high quality which we call character. It finds expression in the Academy's motto: "Duty, honor, country." Briefly summed up, it means honorable conduct in all actions and in all dealings with one's fellows. The basis of it is loyalty—loyalty to those fundamental moral principles upon which all right conduct is based, loyalty to the profession of which one is a member, loyalty to superiors, and loyalty to the Nation in whose service we are all enlisted. There is no real success without

this quality. The man who is disloyal to his profession, to his superior, or to his country is disloyal to himself and to all that is best in him. He is his own worst enemy, for he undermines his own character, and thus deprives his efforts of that incentive which is the most powerful of all factors. We all have a right to our own views and opinions, and in most cases which arise we have opportunity to express them. When the decision is against us, instead of shirking, giving lukewarm support, or attempting to show that our opinions are the correct ones, loyalty demands that we give the best that is in us toward the accomplishment of the end desired by those in authority. If your four years' training here has not fixed this truth firmly and ineradicably in your minds, it has failed lamentably in its purpose.

The system of training through which you have passed is designed and arranged to require of you and to impress upon you the necessity of mastering each day's allotted work with the object of developing in you those powers of concentration and application which are necessary for successful accomplishment. You could not have succeeded here had you at any time during your course put off till tomorrow those tasks which were prescribed for today; the same rule must continue to be your standard if you hope to succeed in measuring up to the future duties that will devolve upon you. The course of study and instruction, however, is not such as to warrant the sanguine and self-confident graduate in believing, when he receives his diploma, that he is the possessor of all

knowledge. On the contrary, he has the bare beginnings of knowledge; the foundations of a structure yet to be raised. The clearer this revelation is made to him, the sooner he perceives that he has merely been taught how to acquire and use knowledge, and that successful accomplishment can be attained only by continuing the methods of constant, earnest effort, the better will be his chances of success.

As already stated, in the final test of actual experience it is upon the man himself that success depends. No system of training will carry an incapable or an unfaithful man to success. The world today is above all else a practical world, and it demands results. What it is looking for is men who can and will do things. It is recorded of Lord Kitchener that, when during the South African campaign a subordinate officer reported to him a failure to obey orders and gave reasons therefor, he said to him: "Your reasons for not doing it are the best I ever heard; now go and do it." That is what the world demands today—not men who are fearful of an undertaking, who advance reasons for not doing it or express doubts about its accomplishment, but men who have the courage of their convictions and will find ways to carry it through successfully.

Your duties will bring you more or less in touch with civil life, in contradistinction to the military, and some of you will spend the larger portion of your active careers among civilians. Isolated as you have been during the four most impressionable years of your life, and deprived

in a large measure of contact with the outer world, you have lacked opportunity for learning its ways and the ways in which men in general think and act. In this respect you are not the equals of the graduates of our universities and technical schools, who acquire such knowledge through mental friction that results from contact between men pursuing different courses of study, and by actual touch with the world during term time and in the long vacation periods. This seclusion is, of course, a necessary feature of the military training and must be maintained. I do not speak of it with any idea of change or modification, but for the purpose of calling attention to certain effects of it which should be taken into account by our graduates as they enter upon the duties of life. While there are men in civil life with ideals as high as those held constantly before you here, you will find instances where men gain their ends, without apparent loss of prestige or position, in ways and by means which measured by your standards would be considered neither straightforward nor honorable. In such surroundings one's viewpoint may become distorted, and it behooves us so to live that no discredit will be reflected on the Academy or the Army. The outside world knows our service and our alma mater by the impressions we make upon it, and we owe it to them, to the Nation which educated us, to live up to the ideals of honor, self-abnegation, sacrifice, and devotion to duty which this institution has endeavored to instill in you.

The most important duty that will devolve upon you

is the control, direction, and command of men. To successfully accomplish any task, it is necessary not only that you should give to it the best that is in you, but that you should obtain for it the best there is in those who are under your guidance. To do this, you must have confidence in the undertaking and confidence in your ability to accomplish it in order to inspire that same feeling in them. You must have not only accurate knowledge of their capabilities, but a just appreciation and a full recognition of their needs and rights as fellow men. In other words, be considerate, just, and fair with them in all dealings, treating them as fellow members of the great Brotherhood of Humanity. A discontented force is seldom loyal, and if its discontent is based upon a sense of unjust treatment, it is never efficient. Faith in the ability of a leader is of slight service unless it be united with faith in his justice. When these two are combined, then and then only is developed that irresistible and irrepressible spirit of enthusiasm, that personal interest and pride in the task, which inspires every member of the force, be it military or civil, to give when need arises the last ounce of his strength and the last drop of his blood to the winning of a victory in the honor of which he will share.

We are expected to perform fully and to the best of our ability whatever duty is assigned to us; for this have we been trained and educated, and our aim and purpose should be its successful accomplishment without any other considerations. This, however, is not always the case, for you will find some who are so impressed with

what they call their reputations or who are so desirous of advancing their individual interests that the singleness of purpose no longer controls. The dread of detracting from the one or injuring the other impairs their usefulness and efficiency, for they fear to accept the consequences of responsibility and of decisive action, which are so essential to successful accomplishment.

We are inclined to expect praise or reward for doing nothing more than our duty when, as a matter of fact, we are entitled to neither, since we have done only that which is required of us. It calls to mind an instance which came under my observation in the days before efficiency reports were in vogue. A young officer about to be relieved from duty at a certain station was told by his superior that the latter intended to give him a letter commendatory of his services. The youngster inquired if he had done anything more than his duty, and on learning that while he had not he had performed that duty well, replied that he failed to see why there should be any commendation for doing that for which he had been educated by the Government and retained in its service. This is an example of the spirit that we should strive to acquire—to be content with the consciousness of duty well done; therein lies the reward which gives the greatest gratification and which is secure. With such a spirit the enthusiasm and the hopefulness which contribute so largely in securing successful results will continue with us; without them disappointment and discouragement are too apt to follow. The plaudits of our fellows may be flattering

to our vanity, but they are not lasting: by the next turn of the wheel they may be changed into abuse and condemnation.

It all amounts to this: Whatever your hands find to do, that do with all the might that is in you. That is the lesson of all experience. Face every task with a determination to conquer its difficulties and never to let them conquer you. No task is too small to be done well. For the man who is worthy, who is fit to perform the deeds of the world, even the greatest, sooner or later the opportunity to do them will come. He can abide his time, can rest—"safe in himself as in a fate."

DECORATIONS

(War)

Dec. 1, 1918—Awarded the decoration of Commander of the Legion of Honor by the President of the French Republic, in recognition of the distinguished service rendered to the cause of France and the Allies in the war against the Central Powers as "Directeur des Achats, Approvisionnements et Transports."

Jan. 18, 1919—Awarded the Distinguished Service Medal, "for especially meritorious and conspicuous service in reorganizing the Quartermaster Department and in organizing and administering the Division of Purchase, Storage and Traffic during the War."

Oct. 16, 1919—Appointed Honorary Knight Commander

of the Most Distinguished Order of Saint Michael and Saint George by King George "for distinguished service in the campaign as Chief of the Division of Purchases, etc., General Staff."

Oct. 20, 1920—Awarded a decoration, "Grand Cordon of the Order of the Wen Hu (Striped Tiger), 2nd Class," by the Chinese Government.

MEDALS

NATIONAL GEOGRAPHIC SOCIETY

("A special medal of the National Geographic Society, presented to George Washington Goethals on behalf of the Society by the President of the United States, Woodrow Wilson, the Secretary of State, William Jennings Bryan, presiding, March 3, 1914")

One side of medal:

"National Geographic Society—Incorporated A.D. 1888."

Other side:

"This Special Medal of the National Geographic Society is awarded to George Washington Goethals, to whose Ability and Patriotism the World owes the construction of the Panama Canal.
March 3, 1914"

THE AMERICAN GEOGRAPHICAL SOCIETY OF NEW YORK

One side of medal:

"The American Geographical Society of New York"

Other side:

"The Cullum Geographical Medal
to Major-General George W. Goethals,
Builder of the Panama Canal.
He fulfilled the ancient dream of
Gomara of a highway between the
Atlantic and the Pacific and
thereby transformed forever the
geographic relations of the
commercial world

MCMXVII"

THE GEOGRAPHIC SOCIETY OF CHICAGO

One side of medal:

"The Geographic Society of Chicago"
("I will")

Other side:

"Awarded to George W. Goethals
For Distinguished Service
In the Construction of
The Panama Canal
January 23, 1915"

NATIONAL INSTITUTE OF SOCIAL SCIENCES

One side of medal:

"National Institute of Social Sciences"

Other side:

"National Institute of Social Sciences
Dignus Honore
George W. Goethals

Laura Gardin
Fecit"

THE NATIONAL ACADEMY OF SCIENCES

One side of medal:

"The National Academy of Sciences
George Washington Goethals
Awarded for Eminence in the
Application of
Science to the Public Welfare."

Other side:

Greek transcription, which
translated reads: "Give me
a lever and I will move the earth")

THE CIVIC FORUM

(Presented at Carnegie Hall, N. Y., March 4, 1914)

One side of medal:

"The Civic Forum
Founded New York 1907"

Other side:

"George W. Goethals—Chief Engineer Panama Canal, 1914
For Distinguished Public Service"

THE JOHN FRITZ MEDAL

Awarded May 22, 1919, by the John Fritz Medal Board of Award, New York City, N. Y.,

"For achievement as builder of the Panama Canal."

Other medals received:

President's Medal of the Architectural League

Panama Pacific International Exposition Medal
World's Fair Medal
The Roosevelt Canal Medal with Clasps

MEMBERSHIP

SOCIETIES

Yale Engineering Association
The Academy of Political Science in the City of New York, December, 1918
American Society of Civil Engineers
Member—March 1, 1910
Director—April 16, 1918
American Academy of Arts and Sciences (Fellow)
National Institute of Social Sciences (one of the Vice-Presidents)
The Society of American Military Engineers
The American Legion—Tisbury Post No. 257 (Department of Massachusetts)
Military Order of the World War (Companion)
Member of the Advisory Staff—April 18, 1922

HONORARY

The Society of Engineers at Panama
The American Society of Mechanical Engineers—1917
Institution of Civil Engineers (London)
Dutch Royal Society of Engineers
Tau Beta Pi
American Philosophical Society of Philadelphia

The Western Society of Engineers (Chicago)
American Society of the French Legion of Honor, Inc. (Founder Member)

CLUBS

The University Club (New York City)
November 2, 1898—U. S. M. A. '80
The Century Association of New York
May 7, 1921
Army and Navy Club of America
Service Member—January 4, 1922
Member of Board of Directors—November 26, 1923
Member Board of Governors—January 9, 1924 (for term of 3 years)
Army and Navy Club (Washington, D. C.)
Metropolitan Club (Washington, D. C.)
Chevy Chase Club (Chevy Chase, Maryland)
University Club of Chicago, June 22, 1922
Harvard Club of New York City, 1912

HONORARY

St. Nicholas Club of New York
India House (New York City)
Engineers Club of Chicago
The Union League Club of the City of New York
The Engineers' Club of Philadelphia
The Yosemite Mountain Club (Los Angeles, California)

Army and Navy Club of Southern California
Palm Beach Yacht Club

MISCELLANEOUS

Army Athletic Association—1898
Delta Upsilon Fraternity (Hon.)
American National Red Cross (Supporting Member)
Army and Navy Union—N. Y. Garrison 194 (Member at Large)
The New York Society of the Panama Canal
The West Point Society of New York
Boy Scouts of America
Member of National Court of Honor, March 12, 1918
Member of Executive Board of National Council, December 27, 1920
Mexican Chamber of Commerce of the United States, Inc. Member of Board of Directors, May 19, 1922
National Association of Audubon Societies (Life Member)
Dukes County Historical Society
Dartmouth Alumni Association of New York
The American Seamen's Friend Society (Honorary Vice-President)
National Security League
Member of the Save-the-Navy Committee, April, 1922
National Federation of Construction Industries

Committee on Commercial Engineering, January 24, 1922

The Better Understanding Society, New York, Honorary Member, December 17, 1923

HONORARY DEGREES

1912—Harvard University (LL.D.)
Yale University (LL.D.)
Columbia University (D.Sc.)
1913—University of Pennsylvania (LL.D.)
1915—Johns Hopkins University (LL.D.)
Chicago Polytechnic (Ph.D.)
Princeton University (LL.D.)
1917—Rutgers (D.Sc.)
1920—Dartmouth College (LL.D.)
1922—The College of the City of New York (B.Sc.)

Honorary degrees from the following Universities were declined because of inability to go:
University of California
University of Tulane (New Orleans)
University of Michigan
Ohio State University

All of General Goethals' decorations, medals, and honorary degrees were presented to the United States Military Academy by his family during Alumni Week of 1928. The citations for the decorations and the diplomas for the honorary degrees and certain of the medals may be seen at the Library; the medals at the Ordnance Museum at West Point.

THE END

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